APRIL 1981 NUMBER 440 -- Part II

Solar-Geophysical Data comprehensive reports

Data for October 1980 & Miscellanea

Explanation of Data Reports Issued as Number 438 (Supplement) February 1981

PHYSICS-ASTRONOMY LIBRARY

SERIALS
JUN 19 1981
MICHIGAN STATE UNIVERSITY
LIBRARIES

Late Data **Pages 41-48**

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / ENVIRONMENTAL DATA AND INFORMATION SERVICE / BOULDER, COLORADO

U.S. DEPARTMENT OF COMMERCE
Malcolm Baldrige, Secretary
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
James P. Walsh, Acting Administrator
ENVIRONMENTAL DATA AND INFORMATION SERVICE
Thomas D. Potter, Director

Solar - Geophysical Data

Part II (Comprehensive Reports)

NO. 440 APRIL 1981

DATA FOR
OCTOBER 1980

NATIONAL GEOPHYSICAL AND SOLAR - TERRESTRIAL DATA CENTER
BOULDER, COLORADO

For obtaining bulletins on a data exchange basis, send request to: World Data Center A for Solar-Terrestrial Physics, NOAA, Boulder, Colorado 80302.

For sale through the National Geophysical and Solar-Terrestrial Data Center, NOAA, Boulder, CO 80302. Subscription Price: $34.00 annually for both Part I (Prompt Reports) and Part II (Comprehensive Reports) or $18.00 annually for either part. Annual supplement containing explanation is included. For foreign mailing add $32.00 for both parts or $16.00 for either part. Single issue price $1.50 for either part and $1.40 for the extra issue. Make checks and money orders payable to: Department of Commerce, NOAA/NGSDC.

To standardize referencing these reports in the open literature, the following format is recommended:

Solar-Geophysical Data, 390 Part I (or Part II), pages, February 1977, U.S. Department of Commerce, (Boulder, Colorado, U.S.A. 80303).

SOLAR-GEOPHYSICAL DATA

No. 440

Issued in two parts

Helen E. Coffey, Editor

J. Virginia Lincoln, Chief
Solar-Terrestrial Physics Division

CONTENTS

Part I (Prompt Reports)

PAGE

Index for 1980-1981 2

Data for March 1981 3-46

Data for February 1981 47-156

Late Data 157-160
Cosmic Rays Alert, Deep River, Climax Jan 1981
Geomagnetic Indices Jan 1981
Hourly Equatorial Dst Values

Part II (Comprehensive Reports)

Index for 1980-1981 2

Data for October 1980 3-39
Note on Delay of Solar Flare Data 4

Miscellaneous Data 41-48
Energetic Solar Particles IMP 8 April 1980
Synoptic Solar Maps Jul 5-Aug 29, 1980
Active Regions Jul 5-Aug 29, 1980

DETAILED COVERAGE FOR 1980-81 PUBLISHED IN "SOLAR-GEOPHYSICAL DATA"

		1980 Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	1981 Jan	Feb	Mar
A.	SOLAR AND INTERPLANETARY PHENOMENA													
A.1	Sunspot Drawings	429A 42	430A 42	431A 48	432A 50	433A 48	434A 46	435A 50	436A 50	437A 60	438A 44	439A 46	440A 52	
A.2a	Zurich Provisional Relative Sunspot Numbers Rz	428A 10	429A 9	430A 11	431A 11	432A 11	433A 11	434A 11	435A 11	436A 11	437A 11	---	---	---
A.2aa	International Provisional Relative Sunspot Numbers Ri											438A 11	439A 9	440A 11
A.2b	Zurich Final Sunspot Numbers Rz	440A 10	440A 10	440A 10	440A 10	440A 10	440A 10	440A 10	440A 10	440A 10	440A 10			
A.2c	American Relative Sunspot Numbers Ra	428A 10	429A 9	430A 11	431A 11	432A 11	433A 11	434A 11	435A 11	436A 11	437A 11	438A 11	439A 9	440A 11
A.3a	Mt. Wilson Magnetograms	429A 42	430A 52	431A 48	432A 50	433A 48	434A 46	435A 50	436A 50	437A 60	438A 44	439A 46	440A 52	
A.3b	Mt. Wilson Magnetic Characteristics of Sunspots	429A104	430A112	431A110	432A110	433A110	434A108	435A110	436A112	437A120	438A106	439A108	440A108	
A.3c	Kitt Peak Magnetograms	429A 42	430A 52	431A 48	432A 50	433A 48	434A 46	435A 50	436A 50	437A 60	438A 44	439A 46	440A 52	
A.3d	Mean Solar Magnetic Field (Stanford)	428A 34	429A 35	430A 44	431A 41	432A 42	433A 40	434A 38	435A 42	436A 42	437A 48	438A 36	439A 38	440A 46
A.3e	Stanford Magnetograms	429A 42	430A 52	431A 48	432A 50	433A 48	434A 46	435A 50	436A 50	437A 60	438A 44	439A 46	439A 52	
A.4	H-alpha Filtergrams	429A 42	430A 52	431A 48	432A 50	433A 48	434A 46	435A 50	436A 50	437A 60	438A 44	439A 46	440A 52	
A.5	Calcium Plage Drawings - Mt. Wilson	429A 42	430A 52	431A 48	432A 50	433A 48	434A 46	435A 50	436A 50	437A 60	438A 44	439A 46	439A 52	
A.5a	Calcium Plage (Mt. Wilson) and Sunspot Regions	429A104	430A112	431A110	432A110	433A110	434A108	435A110	436A112	437A120	438A106	439A108	440A108	
A.5b	Mt. Wilson Daily Calcium Plage Indices	429A115	430A123	431A121	432A128	433A127	434A125	435A127	436A127	437A134	438A121	439A123	440A121	
A.6	H-alpha Synoptic Charts	429A 39	430A 48	431A 44	432A 46	433A 44		435A 46	436A 46	437A 52	438A 40	439A 42	440A 48	
A.6b	Synoptic Chart and Active Regions (Paris)	4368 96	4368 97	4378 40	4388 33	4398120	4398121	440B 48						
A.6c	Stanford Solar Magnetic Field Synoptic Charts	429A 40	430A 49	431A 45	432A 47	433A 45	434A 43	435A 47	436A 47	437A 54	438A 41	439A 43	440A 49	
A.6d	Kitt Peak Solar Magnetic Field Synoptic Charts	429A 41	430A 50		432A 48	433A 46	434A 44	435A 48	436A 48	437A 56	438A 42	439A 44	440A 50	
A.6e	Mass Ejections from the Sun	434B 56	435B 85	435B 47	436B 46	436B 36	438B 29	439B 28	440B 38					
A.7f	Helium D3 Chromosphere (Big Bear)	428A 35	429A 36	430A 41	432A167	432A 37	433A 35	436A177	436A177	436A 39	437A 44	438A 33	439A 39	
A.7g	Helium Synoptic Maps (KPNO)	431A162	430A 51	431A 46	432A 49	433A 47	434A 45	435A 49	436A 49	437A 58	438A 43	439A 45	440A 51	
A.7h	Coronal Line Emission (Sac Peak)	429A 42	430A 52	431A 48	432A 50	433A 48	434A 46	435A 50	436A 50	437A 60	438A 44	439A 46	440A 52	
A.8aa	2800 MHz - Daily Values of Solar Flux (ARO-Ottawa)	428A 10	429A 9	430A 11	431A 11	432A 11	433A 11	433A 11	435A 11	436A 11	437A 11	438A 11	439A 9	440A 11
A.8ac	2800 MHz - Daily Values of Adj. Solar Flux (ARO-Ottawa)	428A 10	429A 9	430A 11	431A 11	432A 11	433A 11	433A 11	435A 11	436A 11	437A 11	438A 11	439A 9	440A 11
A.8g	Daily Values of Adjusted Solar Flux (AFGL)	428A 10	429A 9	430A 11	431A 11	432A 11	433A 11	434A 11	435A 11	436A 11	437A 11	438A 11	439A 9	440A 11
A.10a	169 MHz - Interferometric Observations (Nancay)	428A 20	429A 22	430A 26	432A166	432A 24	433A 22	434A 25	436A176	438A160	438A161	439A154	439A 24	440A 29
A.10c	21 cm East-West Solar Scans (Fleurs)	429A150	429A 25	430A 29	431A 28	432A 27	433A 25	434A 28	435A 30	436A 29	437A 34	438A 24	439A 27	440A 32
A.10d	43 cm East-West Solar Scans (Fleurs)	429A151	429A 26	430A 30	431A 29	432A 28	433A 26	434A 29	435A 31	436A 30	437A 35	438A 25	439A 29	440A 33
A.10e	10.7 cm East-West Solar Scans (Ottawa-ARO)	428A 22	430A175	430A 28	431A 27	432A 26	433A 24	434A 27	435A 29	436A 28	437A 33	438A 23	439A 26	440A 31
A.10f	3 cm East-West Solar Scans (Toyokawa)	428A 21	429A 23	430A 27	431A 26	432A 25	433A 23	434A 26	435A 28	436A 27	437A 32	438A 22	439A 25	440A 30
A.11g	Solar X-ray (SMS/GOES) (graphs)	433B 26	434B 6	435B 41	436B 41	437B 30	438B 23	439B 23	440B 32					
A.12bb	Cosmic Ray Protons (Pioneers 8 & 9)	428A 28	429A 32	431A160	431A 38	432A 38	---	---	---	---	---	---	---	---
A.12e	Energetic Solar Particles (IMP H & J)		440B 42											
A.13a	Solar Wind (Pioneers 6 & 7)	428A 27	429A 32	---	431A 38	432A 39	433A 36	---	---	---	---	---	---	---
A.13ab	Solar Wind (Pioneers 8 & 9)	428A 28	429A 32	431A160	431A 38	432A 38	433A 37	---	---	---	---	---	---	---
A.13d	Solar Wind from IPS Measurements	428A 30	430A164	430A 37	431A 36	432A 34	433A 31	434A 34	435A 37	436A 37	437A 41			
A.13e	Solar Plasma (IMP H & J)	435B 50	434B 5	436B100	436B 40	437B 29								
A.13f	Solar Wind (Pioneer 12 (Venus))	428A 29	429A 33	431A161	431A 39	432A 39	433A 37	435A160	435A 43	436A 43	437A 45	437A 37	---	---
A.17	Interplanetary Magnetic Field (Pioneer 9)	428A 28	429A 32	431A160	431A 38	432A 38	433A 37	---	---	---	---	---	---	---
A.17	Interplanetary Magnetic Field (Pioneer 12)	429A119	430A127	431A125	432A132	433A131	---	---	436A132	438A162	438A125	439A127	440A153	
A.17c	Inferred IP Magnetic Field	428A 32	430A 42	430A 42	432A 40	432A 40	433A 38	436A 40	436A 40	436A 40	437A 46	438A 34	439A 36	440A 44
A.18	Interplanetary Electric Field (Pioneer 9)	428A 28	429A 32	431A160	431A 38	432A138	---	---	---	---	---	---	---	---
B.	IONOSPHERIC (AND RADIO WAVE PROPAGATION) PHENOMENA													
B.52	Graphs of Transmission Frequency Range	429A146	430A160	431A156	432A162	433A154	434A154	435A156	436A172	437A170	438A156	439A150	440A164	
B.53	Quality Figures Based on Frequency Ranges	429A148	430A159	431A155	432A164	433A156	434A153	435A158	436A174	437A169	438A155	439A152	440A156	
C.	FLARE-ASSOCIATED EVENTS													
C.1a	Optical Observations Flares	428A 15	429A 14	430A 16	431A 16	432A 16	433A 16	434A 16	435A 16	436A 16	437A 16	438A 16	439A 14	440A 18
C.1ba	Optical Observations Flares (Standardized Data)													
C.1d	Flare Patrol Observations	---	---	430A 46	431A 25	432A 23	433A 21	434A 24	435A 27	436A 26	437A 31	438A 21	439A 23	440A 28
C.1d	Flare Patrol Observations													
C.1e	Flare Indices (by day)													
C.1f	Flare Indices (by Region)													
C.3	Solar Radio Waves - Outstanding Occurrences	433B 5	435B 51	435B 5	436B 5	437B 5	438B 5	439B 5	440B 5					
	Solar Radio Waves - Fixed Frequencies - Selected	428A 23	429A 27	430A 31	431A 30	432A 29	433A 27	434A 30	435A 32	436A 31	437A 36	438A 26	439A 29	440A 34
C.4a	Solar Radio Spectral Obs. (Fort Davis)	429A120	430A128	431A126	432A133	433A132	434A129	435A131	436A133	437A139	439A155	439A128	440A126	
C.4d	Solar Radio Spectral Obs. (Culgoora)	429A120	430A128	431A126	432A133	433A132	434A129	435A131	436A133	437A139	438A126	439A128	440A126	
C.4e	Solar Radio Spectral Obs. (Weissenau)	429A120	430A128	431A126	432A133	434A177	434A129	435A131	436A133	437A139	438A126	439A128	440A126	
C.4f	Solar Radio Spectral Obs. (Sagamore Hill)	429A120	430A128	431A126	433A158	433A132	434A129	435A131	436A133	437A139	438A126	439A128	440A126	
C.4h	Solar Radio Spectral Obs. (Dwingeloo)	439A120	430A128	431A126	432A133	433A132	434A129	435A131	436A133	437A139	438A126	439A128	440A126	
C.4i	Solar Radio Spectral Obs. (Bleien)	429A120	430A128	431A126	432A133	434A177	434A129	435A131	436A133	437A139	438A126	439A128	440A126	
C.4j	Solar Radio Spectral Obs. (Manila)													
C.4k	Solar Radio Spectral Obs. (Learmonth)	429A120	430A128	431A126	433A158	433A132	434A129	435A131	436A133	437A139	438A126	439A128	440A126	
C.4l	Solar Radio Spectral Obs. (Palehua)	429A120	430A128	431A126	433A158	433A132	434A129	435A131	436A133	437A139	438A126	439A128	440A126	
C.5e	Solar X-ray (SMS/GOES) (graphs)	433B 26	434B 6	435B 41	436B 41	437B 30	438B 23	439B 23	440B 32					
C.6	Sudden Ionospheric Disturbances	429A116	430A124	431A122	432A129	433A128	434A126	435A128	436A128	437A135	438A122	439A124	440A122	
D.	GEOMAGNETIC AND MAGNETOSPHERIC PHENOMENA													
D.1a	Geomagnetic Indices Kp, Km, Ks, Km, Ap, aa, Cp	429A142	430A155	431A151	432A158	433A150	434A147	435A152	436A166	437A163	438A149	439A145	440A149	
D.1ha	27-day Chart of Kp Indices	429A144	430A157	431A153	432A160	433A152	434A149	435A154	436A168	437A165	438A151	439A147	440A151	
D.1c	27-day Chart of C9													
D.1ca	aa graph 1868 - present													
D.1d	Principal Magnetic Storms	429A145	430A158	431A154	432A161	433A153	434A152	435A155	436A171	437A168	438A154	439A148	440A152	
D.1e	Reduced Magnetograms													
D.1f	Sudden Commencement and Solar Flare Effects	431A168	431A169	433A168	433A168	434A188	435A164	436A179	437A176	437A169	439A163	439A149		
D.1g	Equatorial Indices Dst	431A166	431A167	433A167	434A186	434A187		436A178	436A168	437A167	438A153	440A160		
D.1h	Geomagnetic Substorm Log (Boulder)	428A 36	429A 37	430A 45	431A 42	432A 43	433A 41	434A 40	435A 44	436A 44	437A 49	438A 38	439A 40	440A 43
F.	COSMIC RAYS													
F.1a	Cosmic Ray Neutron Counts (Deep River)	429A137	430A154	432A170	433A165	434A183	434A146	435A151	436A165	438A163	439A162	440A159	440A145	
F.1b	Cosmic Ray Neutron Counts (Climax)	430A167	430A154	431A150	433A165	433A147		436A165	438A163	438A163		440A159		
F.1e	Cosmic Ray Neutron Counts (Alert)	429A137	430A154	432A170	433A165	434A183	434A146	435A151	436A165	438A163	439A162	440A159	440A145	
F.1h	Cosmic Ray Neutron Counts (Thule)	429A137	430A154	431A150	432A155	433A147	434A146	435A151	436A165	437A162	438A148	439A144	440A145	
F.1i	Cosmic Ray Neutron Counts (Kiel)	429A137	430A154	431A150	432A155	433A147	434A146	435A151	436A165	437A162	438A148	439A144	440A145	
F.1j	Cosmic Ray Neutron Counts (Tokyo)	429A137	430A154	431A150	433A155	433A147	434A146	435A151	436A165	437A162	438A148	439A144	440A145	
F.1l	Cosmic Ray Neutron Counts (Huancayo)	430A167	431A163	433A165	435A161	437A175	437A175	437A175	438A163	439A162	439A162			
H.	MISCELLANEOUS													
H.60	IUWDS Alert Decisions	428A 4	429A 4	430A 5	431A 5	432A 5	433A 5	434A 5	435A 5	436A 5	437A 5	438A 5	439A 4	440A 5
H.62	Abbreviated Calendar Record													

Notes:

"429A 42" listed under 1980 Mar means that the sunspot drawings for Mar 1980 were contained in *Solar-Geophysical Data* Number 429 - Part I, beginning on page 42.

A = Part I, B = Part II.

----- = no data available.
blank = data not yet received.

SGD 440 Part II (Comprehensive)

OCTOBER 1980 DATA

Contents

	Page
Active Regions (Data not available at time of publication.)	
Synoptic Solar Maps (Data not available at time of publication.)	
Solar Flares (Data not available at time of publication.)	SEE NOTE ON PAGE 4.
H-alpha Solar Flares (Standardized Data)	
Daily Flare Indices	
Intervals of No Flare Patrol Observation	
Solar Radio Emission	5-31
Outstanding Occurrences (Fixed Frequencies)	
Energetic Solar Particles and Plasma (Data not available at time of publication.)	
Solar X-ray Radiation	
SMS-GOES	32-37
Mass Ejections from the Sun	38-39

NOTE ON DELAY OF GROUPED SOLAR FLARE DATA:

Beginning with the July 1980 issue of *Solar-Geophysical Data*, we planned to publish the final listing of solar flares 13 months, rather than 6 months, from the date of observation. Although this schedule has not been met since the July 1980 issue was published, we and our colleagues at the Meudon Observatory plan to return to the 13-month delay as soon as possible. This new schedule will cause the Daily Flare Index and the Regional Flare Index to appear 13 and 14 months from the date of observation. At the same time we are suspending indefinitely publication of the Abbreviated Calendar Record. We deeply regret this situation, but the volume of data recorded during sunspot maximum and computer conversion problems at the Meudon Observatory and at NGSDC have forced these greater delays on us.

For researchers who need the comprehensive solar flare data more promptly, NGSDC plans to generate in the next few weeks "preliminary" listings from November 1979 through the "current" month that lies 13 months from the month of observation. These complete tabulations will lack the final Meudon corrections, and will only be published after they have been made. Nevertheless, printouts for this period will be available on request, if they be recognized at "preliminary" when used in research projects. A fee may be charged for reproducing these data. Please contact the editor, Helen E. Coffey, at (303) 497-6223 or telex SOLTERWARN BLDR 45897.

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
01	1000	TYKW	45 C	0003.0E	0003.4	2.0D	4	1 D		
	1000	TYKW	45 C	0006.0	0007.7	3.0	3	.8		
	1000	TYKW	45 C	0010.2	0011.2	2.5	4	.8		
	1000	TYKW	5 S	0018.5	0019.5	2.0	2	.7		
	1000	TYKW	5 S	0022.0	0023.4	2.5	19	2		
	2000	TYKW	5 S	0022.0	0023.3	2.5	4.5	1.5		
	3750	TYKW	5 S	0022.0	0023.2	2.0	5	1.5		
	200	HIRA	42 SER	0022.4	0038.3	16.0	1000			0
	100	HIRA	42 SER	0022.5	0038.0	18.0	1700			WL
	1000	TYKW		0036.0	0036.8		4			
	1000	TYKW	45 C	0036.0	0038.0	4.0	17	1		
	9400	TYKW		0036.0	0038.0		10			
	9400	TYKW	45 C	0036.0	0036.8	5.0	10	2		
	2000	TYKW		0036.0	0038		4			
	2000	TYKW	45 C	0036.0	0036.8	4.0	5	2		
	3750	TYKW	45 C	0036.0	0036.8	5.0	13	4		
	3750	TYKW		0036.0	0038.0		11			
	2000	TYKW	5 S	0156.5	0157	3.0	2	.7		
	3750	TYKW	5 S	0156.5	0157.0	3.5	3	1		
	17000	NOBE	20 GRF	0312.4	0314.2	10.0	17			0
	1000	TYKW	45 C	0542.4	0542.7	.5	6	1		
	950	GORK	1 S	0641.4	0642.2	2.6	9.7			
	1000	TYKW	5 S	0641.5	0642.0	1.0D	8	2 D		
	2000	TYKW	45 C	0641.5	0642.2	1.0D	12	4 D		INTERFERENCE
	2950	GORK	2 S/F	0642.0	0642.1	2.1	8.0			
	1000	TYKW	5 S	0753.5	0753.8	.5	18	6		
	204	IZMI	8 S	0756.0	0756.0	1.0	180 D	140		
	260	ONDR	2 S/F	0856.3	0856.6	.5	8			
	430	KRAK	4 S/F	0950.2	0950.2	.5	41	4		
	3100	CRIM	1 S	0957.5	0958.0	1.0	4	1		
	2950	GORK	2 S/F	0958.0	0958.5	2.0	3.0			
	5200	BERN	8 S	1010.0	1010.5	.7	25.0			ONLY PAPER REC
	3200	BERN	8 S	1010.0	1010.5	.7	.0			ONLY PAPER REC
	430	KRAK	42 SER	1017.0U	1019 U	3.0U	300			
	3100	CRIM	3 S	1020.0	1025.0	5.0D	285	93		
	19600	BERN	4 S/F	1022.0	1026.5	15.0	15.0			ONLY PAPER REC
	8400	BERN	4 S/F	1022.0	1026.5	27.0	10.0			ONLY PAPER REC
	11800	BERN	4 S/F	1022.0	1026.5	24.0	10.0			ONLY PAPER REC
	5200	BERN	4 S/F	1024.0	1026.5	27.0	12.0			ONLY PAPER REC
	3200	BERN	4 S/F	1024.0	1026.5	10.0	.0			ONLY PAPER REC
	9100	GORK	20 GRF	1024.5	1027.2	17.5	12			
	808	ONDR	2 S/F	1025.5	1026.8	2.5	25	4		
	3000	POTS	4 S/F	1025.5	1025.8	2.5	27			
	1470	POTS		1025.5	1029.9		15			
	1470	POTS	42 SER	1025.5	1027.2	5.0	48			
	9500	POTS	1 S	1025.5	1027	5.5	6.7			
	260	ONDR	42 SER	1025.6	1029.7	5.0	21			
	930	BORD	42 SER	1025.6	1026.7	4.8	71	3		
	2950	GORK	46 C	1025.8	1026.3	7.1	24			
	2950	GORK		1025.8	1027.1		20			
	810	KRAK	7 C	1025.8	1026.7	1.5	14	2		
	950	GORK	46 C	1025.9	1026.2	1.8	11			
	950	GORK		1025.9	1026.9		30			
	650	GORK	2 S/F	1026.0	1027.1	2.3	3.6			
	204	IZMI	7 C	1026.0	1026.0	.5	60	30		
	204	IZMI	41 F	1029.5	1030.2	1.0	153			
	536	ONDR	4 S/F	1029.5	1030.2	1.5	34	2		
	810	KRAK	8 S	1230.5	1230.7	.3	6			
	260	ONDR	8 S	1249.2	1249.2	.2	7			
	3200	BERN	1 S	1249.2	1254.3	28.0	.0			ONLY PAPER REC
	5200	BERN	1 S	1249.2	1254.3	28.0	18.0			ONLY PAPER REC
	536	ONDR	8 S	1249.3	1249.3	.2	18			
	3000	POTS	20 GRF	1251.0	1253.7	9.0	22			
	19600	BERN	1 S	1251.0	1256.5	15.0U	26.0			ONLY PAPER REC
	8400	BERN	1 S	1251.0	1254.3	18.0	17.0			ONLY PAPER REC
	11800	BERN	1 S	1251.0	1254.3	18.0	13.0			ONLY PAPER REC
	9400	HUAN	S	1251.5	1254.8	7.3	19.9	9.4		0
	2800	OTTA	3 S	1252.0	1253.5	8.0	12.6	4.2		
	9500	POTS	20 GRF	1252.0	1255	8.0	12			
	3200	BERN	1 S	1336.0	1336.7	6.0	.0			ONLY PAPER REC
	5200	BERN	1 S	1336.0	1336.7	6.0	10.0			ONLY PAPER REC
	2800	OTTA	1 S	1442.0	1443	4.0	3.8	1.9		
	11800	BERN	3 S	1504.0	1507.0	12.0U	30.0			ONLY PAPER REC
	3200	BERN	3 S	1504.0	1507.0	15.0	.0			ONLY PAPER REC
	19600	BERN	3 S	1504.0	1507.0	12.0U	34.0			ONLY PAPER REC
	5200	BERN	3 S	1504.0	1507.0	15.0	36.0			ONLY PAPER REC
	8400	BERN	3 S	1504.0	1507.0	12.0	35.0			ONLY PAPER REC
	228	HARS	42 SER	1506.2	1506.8	2.2	205	70		
	2800	OTTA	3 S	1506.5	1507.4	3.0	23.6	8.0		
	9400	HUAN	S	1506.9	1507.3	2.6	30.7	12.1		R
	10715	DWIN	1 S	1507.0	1007.5	3.0	10	5		
	2650	DWIN	1 S	1507.0	1507.5	2.0	25	15		
	930	BORD	46 C	1507.0	1508.1	2.0	15	5		
	35000	BERN	20 GRF	1539.0	1541.5U	12.0U	120.0			ONLY PAPER REC

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
01	8400	BERN	20	GRF	1539.0	1541.5U	12.0U	11.0			ONLY PAPER REC
	19600	BERN	20	GRF	1539.0	1541.5U	12.0U	34.0			ONLY PAPER REC
	11800	BERN	20	GRF	1539.0	1541.5U	12.0U	19.0			ONLY PAPER REC
	2695	PENT	45	C	2002.0	2002.5	5.0	11.2	2.8		
02	2930	VORO	45	C	0155.0	0158	10.0	204			
	1000	TYKW	45	C	0156.0	0159.3	5.0	4	1		
	2000	TYKW	45	C	0156.0	0159.0	5.0	50	15		
	3750	TYKW	45	C	0156.0	0157.4	5.0	125	15		
	1000	TYKW	45	C	0215.0	0216.0	1.5	3.5	1		
	1000	TYKW	20	PRE	0308.0	0309.5	4.0	2	.7		
	2000	TYKW	20	PRE	0309.0E	0309.6	3.0D	4	1 D		
	3750	TYKW	20	PRE	0309.0	0309.6	3.0	2	1		
	2930	VORO	45	C	0310.0	0312	10.0	43			
	2000	TYKW	5	S	0312.0	0313.3	7.0	19	4		
	3750	TYKW	45	C	0312.0	0313.3	6.0	25	9		
	9400	TYKW	45	C	0312.0	0314.6	6.0	20	7		
	1000	TYKW	5	S	0312.0	0313.4	5.0	33	5		
	200	HIRA	46	C	0312.3	0313.2	2.0	150	30		0
	5730	IRKU			0312.3	0314.7		26			L
	5730	IRKU			0312.3	0316.5		9			L
	5730	IRKU	45	C	0312.3	0313.4	6.0	24	10		L
	3750	TYKW	29	PBI	0318.0		20.0	2	1		
	9400	TYKW	29	PBI	0318.0		20.0	3	1.5		
	3750	TYKW	5	S	0354.0	0355	3.0	1	.4		
	2000	TYKW	5	S	0354.0	0355	3.0	1	.4		
	9100	GORK	20	GRF	0542.7	0558.8	22.0	10			
	3750	TYKW	5	S	0543.0	0545	11.0	2	1		
	9400	TYKW	5	S	0544.0	0549	12.0	5	2		
	1000	TYKW	45	C	0557.0	0558.7	3.0D	11	3 D		
	9400	TYKW	5	S	0557.0	0559	4.0	4	2		
	950	GORK	1	S	0557.0	0559.0	4.7	10			
	3750	TYKW	45	C	0557.0	0558.7	3.0D	11	3 D		
	2000	TYKW	45	C	0557.0	0558.6	4.0	8	3		
	2950	GORK	2	S/F	0557.1	0558.6	7.0				
	113	POTS	41	F	0557.4	0558.7	2.0	500	20		III
	234	POTS	4	S/F	0558.3	0559.0	1.0	1000	200		III
	650	GORK	1	S	0558.5	0559.6	3.3	3.8	1.9		
	3100	CRIM	45	C	0744.0	0746.5	11.0	30	12		
	3100	CRIM			0744.0	0749.0		32			
	2950	GORK	2	S/F	0745.1	0746.2	5.7	4.0			
	808	ONDR	2	S/F	0910.8	0911.3	1.0	32			
	536	ONDR	2	S/F	0911.3	0911.8	1.0	25			
	260	ONDR	4	S/F	1012.8	1014.2	2.0	60	2.5		
	228	HARS	45	C	1013.2	1013.9	1.4	430	130		
	204	IIMI	7	C	1013.5	1014.0	.8	180 D	142		
	127	TORN	8	S	1013.6	1014.0	.8	1000	900		
	234	POTS	4	S/F	1013.8	1013.8	.5	400	80		III
	33	UPIC	8	S	1013.8	1013.9	.4				
	113	POTS	4	S/F	1014.0	1014.1	.5	100	25		III
	29	UPIC	8	S	1014.0	1014.2	.5				
	2800	OTTA	21	GRF	1645.0	1720	95.0	3.6	1.8		
	2800	OTTA	2	S/F	1648.0	1650	4.0	4.4	2.2		
	2800	OTTA	2	S/F	1703.0	1705	9.0	7.0	3.0		
	2800	OTTA	8	S	1732.0	1732	.1	16.6			
	2800	OTTA	3	S	2158.3	2159.8	4.7	195.0	34.0		
	9400	HUAN		S	2158.3	2159.2	3.7	276.4	54.5		R
	1000	TYKW	5	S	2158.5	2159.6	5.5	145	50		
	500	HIRA	46	C	2158.5	2158.8	7.0	600	200		SL
	3750	TYKW	5	S	2158.5	2159.4	2.5	192	45		
	9400	TYKW	45	C	2158.5	2159.3	2.5	400 D	70		
	2000	TYKW	5	S	2158.5	2159.5	3.5	168	45		
	17000	NOBE	45	C	2158.8	2159.2	1.4	303			R
	200	HIRA	46	C	2158.8	2159.5	6.0	4400	448		
	17000	NOBE	29	PBI	2200.2	2200.2	6.0	14			0
	3750	TYKW	29	PBI	2201.0		10.0	7	2		
	2000	TYKW	29	PBI	2202.0		7.0	9	4		
	2695	PENT	31	ABS	2203.0	2225	60.0	-3.4	-1.7		
	1000	TYKW	29	PBI	2204.0		25.0	10	2.5		
03	3750	TYKW	5	S	0030.0	0040	17.0	2	1		
	3750	TYKW	5	S	0049.0	0051	10.0	3.5	1.5		
	3750	TYKW	5	S	0452.0	0454.7	5.0	3	1		
	2000	TYKW	45	C	0522.0	0536.0	60.0	53	2.5		
	9400	TYKW	20	GRF	0522.0	0535	50.0	5	2		
	3750	TYKW	20	GRF	0522.0	0536	50.0D	5	2 D		INTERFERENCE
	1000	TYKW	45	C	0525.0	0558.3	45.0	3 U	.5U		
	3100	CRIM	1	S	0525.0	0534.0	20.0	6	2		
	2950	GORK	41	F	0529.9	0530.0	12.1	13			
	2950	GORK			0529.9	0535.5		11			
	113	POTS	42	SER	0753.3	0758.0	6.0	100	2		III
	260	ONDR	8	S	0758.3	0758.3	.2	12			
	3100	CRIM	1	S	0815.0	0821.0	18.0	9	3		
	2950	GORK	20	GRF	0816.8	0822.0	13.0	4.9			
	650	GORK	2	S/F	0819.8	0822.4	4.3	3.8			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
03	9100	GORK	2B GRF	0820.4	0822.4	23.0	8	3		
	9500	POTS	2B GRF	0821.0	0823	69.0	12			
	3200	BERN	3 S	0821.0	0822.0	30.0	.0			ONLY PAPER REC
	5200	BERN	3 S	0821.0	0822.0	30.0	12.0			
	204	IZMI	5 S	0910.8	0910.8	1.0	78	30		
	113	POTS	4 S/F	0910.8	0911.5	1.1	100	6		III
	127	TORN	42 SER	0910.8	0911.7	3.0	145			
	29	UPIC	4 S/F	0910.9	0911.3	1.2				
	33	UPIC	4 S/F	0911.0	0911.4	1.1				
	260	ONDR	45 C	0911.0	0911	1.5	7			
	536	ONDR	8 S	0912.3	0912.3	.3	55			
	808	ONDR	8 S	0912.4	0912.4	.2	52			
	260	ONDR	2 S/F	1002.3	1002.8	1.0	8	1		
	9100	GORK	2B GRF	1031.4	1047.8	60.0	6	2		
	260	ONDR	3 S	1124.8	1124.8	.2	10			
	127	TORN	7 C	1132.8	1133.2	1.0	110	90		
	204	IZMI	5 S	1132.8	1133.0	.8	107	55		
	260	ONDR	8 S	1133.0	1133.3	1.0	47			
	33	UPIC	4 S/F	1133.0	1133.4	.9				
	29	UPIC	4 S/F	1133.1	1133.6	1.1				
	228	HARS	42 SER	1225.0	1231.6	7.5	58			
	536	ONDR	8 S	1300.7	1300.7	.2	54			
	260	ONDR	8 S	1301.2	1301.2	.3	40			
	536	ONDR	3 S	1400.6	1400.6	.2	24			
	2800	OTTA	2B GRF	1600.0	1625	65.0	3.2	1.6		
	2800	OTTA	21 GRF	1720.0	1748	80.0	6.4	3.0		
	2800	OTTA	8 S	1735.9	1736	.8	2.8	1.4		
	2695	PENT	2B GRF	2140.0	2300	160.0D	13.4			
	3750	TYKW	21 GRF	2200.0	2300	130.0	8	5		
	2800	TYKW	2B GRF	2200.0	2300	130.0	6	3		
	9400	TYKW	2B GRF	2220.0	2300	100.0	4	2		
	3750	TYKW	5 S	2330.0	2331.4	10.0	3	1.5		
04	2800	TYKW	2B GRF	0030.0	0140	130.0	4	2		
	3750	TYKW	2B GRF	0040.0	0150	120.0	3	1.5		
	1000	TYKW	2B GRF	0045.0	0055	110.0	2	1		
	9400	TYKW	2B GRF	0045.0	0130	120.0	4	2		
	9400	TYKW	5 S	0247.0	0249	13.0	4	2		
	3750	TYKW	5 S	0247.0	0249.5	25.0	10	2.5		
	5730	IRKU	2B GRF	0247.5	0249.4	7.0	17	5		
	5730	IRKU	1 S	0513.0	0513.3	1.0	11	5		
	3750	TYKW	8 S	0513.2	0513.3	.3	2.5	1		
	9400	TYKW	8 S	0513.2	0513.3	.3	13	4		
	1470	POTS	3 S	0740.7	0741.2	1.3	7.3			
	127	TORN	41 F	1157.0	1208.1	12.0	50			
	127	TORN	41 F	1219.0	1221.0	11.0	310			
	2800	OTTA	21 GRF	2005.0	2200	250.0	6.0	3.0		
	2800	OTTA	2B GRF	2120.0	2125	15.0	3.6	2.0		
	2000	TYKW	45 C	2138.0	2141.1	17.0	40	6		
	2800	OTTA	40 F	2139.0	2140.5	15.0	35.0			
	1000	TYKW	5 S	2151.0	2151.7	2.0U	6 U	2 U		
	2000	TYKW	42 SER	2155.0	2204.7	35.0	140	4		
	1000	TYKW	42 SER	2204.5	2213.9	28.0	28	3		
	1000	TYKW		2204.5	2204.8		19			
	3750	TYKW	8 S	2204.7	2204.8	.2	18	4		
	2695	PENT	1 S	2209.9	2210.2	1.0	2.6	1.3		
	2695	PENT	1 S	2211.7	2212	1.0	3.4	1.7		
05	1000	TYKW	45 C	0143.0	0143.8	1.5	6	1		
	260	ONDR	42 SER	1054.0	1244.8	110.0	34			
	536	ONDR	42 SER	1140.0	1244.3	56.0	45			
	2800	OTTA	2B GRF	1225.0	1305	120.0	6.0	3.6		
06	35000	BERN	3 S	0854.5	0854.9	40.0	810			
	2695	PENT	1 S	0009.6	0010	1.5	9.4	4.7		
	9400	TYKW	21 GRF	0230.0	0250	120.0U	4	2		RAIN
	3750	TYKW	21 GRF	0230.0	0255	180.0	4	2		
	2000	TYKW	21 GRF	0230.0	0250	130.0	1.5	.7		
	2000	TYKW	5 S	0401.0	0403	10.0	4	1.5		
	3750	TYKW	5 S	0401.0	0403	12.0	9	2.5		
	9400	TYKW	5 S	0402.0	0404	7.0	4	1.5		
	1000	TYKW	5 S	0402.0	0403	4.0	1.5	.5		
	1000	TYKW	5 S	0409.0	0410	2.0	1	.4		
	1000	TYKW	42 SER	0421.0	0422.7	9.0	15	1		
	2000	TYKW	2B GRF	0445.0	0458	45.0	2	.7		
	3750	TYKW	5 S	0500.0	0508	28.0	2	1		
	100	HIRA	41 F	0503.2	0503.5	4.1	150			WL
	3100	CRIM	25 R	0700.0	0809.0		8			
	228	HARS	45 C	0802.0	0802.3	2.9	130	50		
	260	ONDR	42 SER	0805.0	0855.2	165.0	94			
	204	IZMI	4 S/F	0806.5	0808.0	4.5	72	25		
	33	UPIC	4 S/F	0807.8	0807.9	1.0				
	29	UPIC	4 S/F	0808.5	0808.7	.4				
	536	ONDR	8 S	0810.0	0810	.2	27			
	3100	CRIM	3 S	0851.5	0858 U	14.0	14 D			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
06	650	GORK	3 S	0853.5	0855.1	3.5	55			
	9100	GORK	21 GRF	0854.0	0900 U	15.7	7			
	5200	BERN	3 S	0854.0	0855.3	40.0	280.0			
	3200	BERN	3 S	0854.0	0854.3	22.0	.0			ONLY PAPER REC
	19600	BERN	3 S	0854.5	0855.3	8.0	151.0			
	536	ONDR	4 S/F	0854.5		1.5	60 D	8		
	950	GORK	3 S	0854.8	0855.3	1.6	30			
	2950	GORK	3 S	0854.9	0855.3	2.0	84	40		
	930	BORD	46 C	0854.9	0855.4	5.0	46	7		
	8400	BERN	3 S	0854.9	0855.3	36.0	420.0			
	11800	BERN	3 S	0855.0	0855.3	28.0	404.0			
	9100	GORK	5 S	0855.0	0855.3U	5.0	230 D			
	10715	DWIN	3 S	0855.0	0855.5	5.0	140	50		
	1470	POTS	29 PBI	0855.0	0855.6	23.0	21			
	2650	DWIN	3 S	0855.0	0855.5	6.0	90	50		
	9500	POTS	29 PBI	0855.0	0855.5	34.0	380			
	430	KRAK	47 GB	0855.2	0855.2	.7	600	200 U		
	810	KRAK	4 S/F	0855.3	0855.5	1.2	70	9		
	950	GORK	29 PBI	0856.4	0856.5	15.0	10			
	2950	GORK	29 PBI	0856.9	0857.0	11.0	18	9		
	650	GORK	29 PBI	0857.0	0857.0	17.0	8			
	29	UPIC	42 SER	0948.9	1032.8	73.7				
	33	UPIC	42 SER	0951.5	1016.9	72.3				
	536	ONDR	42 SER	1005.0		45.0	56 D	12		
	113	POTS	42 SER	1005.5	1016.8	17.0	770	5		III
	228	HARS	45 C	1016.5	1016.5	1.1	165	55		
	234	POTS	4 S/F	1016.7	1016.8	.8	170	4		III
	808	ONDR	41 F	1017.0	1018.3	27.0	32	2		
	930	BORD	41 F	1038.8	1039.6	4.2	16	3		
	810	KRAK	7 C	1039.0	1041.3	4.0	20	6		
	430	KRAK	45 C	1039.0E	1041.0		260			
	930	BORD	41 F	1103.9	1103.9	.3	16	2		
	127	TORN	40 F	1109.0	1118.1	12.5	30	4		
	2800	OTTA	20 GRF	1327.0	1400	45.0	2.8			
	9400	HUAN	S	1331.8	1346.0	30.8	4.9	1.3		0
	9500	POTS	3 S	1413.5	1413.7	1.0	24			
	260	ONDR	42 SER	1436.0	1437.6	16.0	36			
	113	POTS	42 SER	1436.1	1437.2	5.4	780	40		III
	2800	OTTA	3 S	1436.2	1436.6	1.0	11.8	5.8		
	3000	POTS	3 S	1436.5	1436.9	1.0	8.8			
	1470	POTS	3 S	1436.5	1437.1	1.5	6.7			
	127	TORN	7 C	1436.7	1437.2	1.3	1400 D	700 D		
	930	BORD	41 F	1436.7	1437.1	.5	134	2		
	9500	POTS	8 S	1443.9	1444.0	.6	51			
	2800	OTTA	21 GRF	1500.0	1553	95.0	8.0	2.6		
	9400	HUAN	S	1545.7	1553.3	44.2	6.5	2.9		0
	930	BORD	41 F	1546.5	1546.6	.7	150	3		
	2800	OTTA	1 S	1546.5	1547	1.5	4.0	2.0		
	2800	OTTA	2 S/F	2115.0	2115.7	2.0	6.2	3.0		
	9400	HUAN	S	2115.0	2115.4	2.5	30.9	11.4		R
	3750	TYKW	5 S	2315.5	2316.1	1.5	2.5	1		
	2000	TYKW	5 S	2315.8	2316.1	1.0	1	.3		
07	127	TORN	43 NS	0746.0	0758.7	237.0	150	6		V1
	100	HIRA	43 NS	2321.8	0018.5	160.0	35	10		ML
	3750	TYKW	5 S	0006.0	0008.5	4.0	5.5	2.5		
	9400	TYKW	5 S	0007.0E	0008.5	3.0D	4	2 D		
	2000	TYKW	5 S	0009.0E	0009 U	1.0D	2 D	1.5D		
	2000	TYKW	29 PBI	0010.0		70.0	1	.5		
	3750	TYKW	29 PBI	0010.0		70.0	3	1		
	3750	TYKW	20 GRF	0203.0	0208	35.0	2	1		
	5730	IRKU	21 GRF	0235.7	0236.4	6.0	25	8		R
	5730	IRKU		0235.7	0240.0		12			R
	3750	TYKW	20 GRF	0240.0	0305	90.0	2	1		
	2000	TYKW	21 GRF	0240.0	0300	90.0	2	1		
	9400	TYKW	5 S	0303.0	0304 U	1.0D	7 U	3 D		RAIN
	2000	TYKW	5 S	0319.0	0321	10.0	1.5	.5		
	9400	TYKW	45 C	0424.0	0426.0	10.0	16	7		
	3750	TYKW	21 GRF	0424.0	0520	180.0	5	2.5		
	3750	TYKW	5 S	0424.0	0426.0	10.0	4	2		
	9400	TYKW	21 GRF	0424.0	0520	80.0D	7	3 D		RAIN
	3100	CRIM	25 R	0622.0	0806.0		10			
	234	POTS	4 S/F	0714.0	0714.2	.3	170	35		
	5730	IRKU	1 S	0742.5	0743.6	3.0	20			R
	33	UPIC	4 S/F	0919.4	0919.6	1.0				
	29	UPIC	4 S/F	0919.7	0920.2	.7				
	5200	BERN	3 S	0924.1	0928.9	45.0	38.0			
	8400	BERN	3 S	0924.1	0928.6	40.0	58.0			
	3100	CRIM	1 S	0926.0	0928.0	3.0	12	4		
	11800	BERN	3 S	0927.0	0928.6	30.0	40.0			
	9500	POTS	29 PBI	0927.0	0928.8	65.0	50			
	9100	GORK	3 S	0927.4	0928.7	2.9	60			
	2950	GORK	20 GRF	0928.0	0928.9	96.0D	7.1			
	3000	POTS	29 PBI	0928.0U	0929	43.0U	10			
	10715	DWIN	1 S	0928.0	0928	2.0	20	10		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	MEAN	INT	POLARIZATION OR REMARKS
07	19600	BERN	3	S	0928.0	0929.4	48.0	45.0			
	9100	GORK	29	PBI	0930.3	0930.3	123.0D	14			
	29	UPIC	45	C	0932.7	0933.4	1.8				
	33	UPIC	45	C	0932.8	0933	2.3				
	260	ONDR	42	SER	0940.0	1038.3	136.0	34			
	204	IZMI	41	F	1035.5	1035.5	1.0	900			
	228	HARS	45	C	1037.5	1037.5	1.2	290	10		
	113	POTS	4	S/F	1037.9	1038.0	.9	100	10		III
	234	POTS	4	S/F	1037.9	1037.9	.8	340	8		III
	204	IZMI	41	F	1129.5	1130.0	2.0	1000			
	228	HARS	45	C	1131.2	1133.0	2.5	290	30		
	234	POTS	4	S/F	1131.7	1132.8	1.3	150	10		III
	127	TORN	4	S/F	1132.3	1132.8	1.3	620	310		
	113	POTS	4	S/F	1132.5	1132.9	.7	350	15		III
	810	KRAK	1	S	1134.5	1134.5	.5	10	2		
	2800	OTTA	20	GRF	1420.0	1430	70.0D	9.0			
	9400	HUAN		S	1424.8	1511.0	123.6	13.0	6.2		R
	9400	HUAN		S	1508.1	1508.8	1.5	27.7	9.4		R
	2800	OTTA	21	GRF	1540.0	1615	170.0	7.8	4.0		
	9400	HUAN		S	1720.5	1721.2	4.1	57.1	19.2		L
	2800	OTTA	3	S	1720.9	1721.3	2.0	14.6	5.0		
	9400	HUAN		S	1740.8	1755.5	38.8	8.2	4.2		0
	2800	OTTA	22	GRF	1910.0	2035	115.0	3.4	2.0		
	2800	OTTA	21	GRF	2110.0	2125	45.0	4.4	2.2		
	2800	OTTA	1	S	2117.2	2118.2	2.0	3.4	1.7		
	2695	PENT	20	GRF	2210.0	2225	30.0	2.8	1.6		
	2695	PENT	4	S/F	2306.0	2309	7.0	222.0	104.0		
	9400	TYKW	45	C	2306.0	2308.7	35.0	440 U	80		RAIN
	3750	TYKW	45	C	2306.0	2308.6	35.0	450	60		
	2000	TYKW	45	C	2306.0	2307.5	35.0	68	19		
	2000	TYKW			2306.0	2308.7		64			
	17000	NOBE	45	C	2306.5	2308.7	6.3	227			0
	35000	NAGO	5	S	2308.0	2309	7.0	43			
	1000	TYKW	45	C	2310.0	2318.2	35.0	118	12		
	17000	NOBE	30	PBI	2312.8	2312.8	96.0	53			0
	2695	PENT	30	PBI	2313.0	2313	70.0D	27.0			
	35000	NAGO	21	GRF	2313.0	2322	73.0	27			
	17000	NOBE	7	C	2313.7	2317.7	13.0	48			R
	2695	PENT	46F	C	2315.0	2318	11.0	33.0	11.2		
	2000	TYKW	30	PBI	2341.0		190.0	10	4		
	9400	TYKW	30	PBI	2341.0		200.0	35	10		
	3750	TYKW	30	PBI	2341.0		190.0	23	9		
	1000	TYKW	30	PBI	2345.0		185.0	3	1.5		
08	1000	TYKW	5	S	0011.0	0011.4	1.0	3	.5		
	17000	NOBE	20	GRF	0129.1	0141.2U	68.0	24			0
	3750	TYKW	45	C	0136.0	0141.6	10.0	25	6		
	9400	TYKW	45	C	0138.0	0141.6	5.0	37	9		
	2000	TYKW	45	C	0139.0	0142.5	7.0	14	3.5		
	1000	TYKW	5	S	0141.0	0142.5	8.0	3.5	1.5		
	9400	TYKW	29	PBI	0143.0		17.0	12	6		
	2000	TYKW	29	PBI	0146.0		24.0	2	1		
	3750	TYKW	29	PBI	0146.0		14.0	4	2		
	3750	TYKW	5	S	0206.5	0207.2	15.0	3	1		
	9400	TYKW	5	S	0206.5	0207.0	30.0	11	3		
	100	HIRA	46	C	0222.9	0225.8	10.0	2500	370		WL
	100	HIRA	45	C	0258.5	0259.0	1.1	430	188		WL
	1000	TYKW	8	S	0335.6	0335.6	.1	8	2		
	9400	TYKW	5	S	0357.5	0358.5	3.0	5	1.5		
	3750	TYKW	45	C	0403.0	0404.3	10.0	6	1.5		
	9400	TYKW	45	C	0403.5	0404.3	5.0	7	1.5		
	2000	TYKW	5	S	0403.8	0404.3	1.5	7	1.5		
	1000	TYKW	45	C	0403.8	0404.5	1.2	2.5	.6		
	9400	TYKW	21	GRF	0415.0	0440	65.0	4	2		
	3750	TYKW	20	GRF	0418.0	0500	60.0	3	1.5		
	9400	TYKW	5	S	0418.5	0419.0	1.5	7	2.5		
	2000	TYKW	20	GRF	0425.0	0450	50.0	1	.5		
	9400	TYKW	45	C	0432.0	0432.4	2.0	4.5	1.5		
	5200	BERN	42	SER	0751.0	0807.5	75.0	12.0			
	3200	BERN	42	SER	0751.0	0831.3	75.0	.0			ONLY PAPER REC
	3100	CRIM	25	R	0757.0	1000.0		7			
	810	KRAK	1	S	0823.7	0823.8	.5	14	4		
	260	ONDR	42	SER	0838.0	1057.8	170.0	13			
	11800	BERN	42	SER	0905.3	1052.5	374.0	7.0			
	8400	BERN	42	SER	0905.3	1412.7	374.0	18.0			
	19600	BERN	42	SER	0905.3	1419.6	374.0	16.0			
	11800	BERN	42	SER	0905.3	1412.8	374.0	17.0			
	8400	BERN	42	SER	0905.3	1052.5	374.0	28.0			
	3200	BERN	42	SER	0905.3	1155.0	374.0	.0			ONLY PAPER REC
	5200	BERN	42	SER	0905.3	1155.1	374.0	16.0			
	5200	BERN	42	SER	0905.3	1303.5	374.0	5.0			
	8400	BERN	42	SER	0905.3	1303.7	374.0	5.0			
	5200	BERN	42	SER	0905.3	1412.7	374.0	13.0			
	8400	BERN	42	SER	0905.3	1155.1	374.0	25.0			
	3200	BERN	42	SER	0905.3	1412.6	374.0	.0			ONLY PAPER REC

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
08	5200	BERN	42 SER	0905.3	1052.3	374.0	9.0			
	9100	GORK	21 GRF	0930.6		150.0D				
	1470	POTS	8 S	0936.5	0936.7	.5	3.6			
	9100	GORK	1 S	0952.4	0952.6	2.0	17	8.5		
	9100	GORK	1 S	0955.2	0955.9	2.3	8	4		
	9500	POTS	3 S	0957.5	0957.9	1.3	12			
	2650	DWIN	2 S/F	1049.0	1049.5	1.0	30	20		
	9100	GORK	1 S	1051.6	1052.1	3.1	11	5		
	3100	CRIM	1 S	1052.0	1053.0	4.0	5	2		
	930	BORD	41 F	1052.0	1052.1	.4	25	2		
	930	BORD	8 S	1127.1	1127.1	.1	26	1		
	810	KRAK	8 S	1127.2	1127.2	.5	48			
	430	KRAK	41 F	1129.0	1132.5	5.0	9	3		
	430	KRAK	42 SER	1143.2	1151.0	13.3	47			
	430	KRAK		1143.2	1154.2		35			
	3000	POTS	4 S/F	1154.0	1155	4.0	21			
	9500	POTS	29 PBI	1154.0	1155	18.0	29			
	1470	POTS	3 S	1154.0	1156	4.0	13			
	10715	DWIN	1 S	1154.0	1155	11.0	15	10		
	2650	DWIN	1 S	1154.0	1155	3.0	25	15		
	2950	GORK	4 S/F	1154.1	1154.7	5.7	22			
	9100	GORK	4 S/F	1154.2	1155.0	6.2	33			
	9400	HUAN	S	1154.3	1156.3	5.6	38.9	21.7		R
	536	ONDR	45 C	1154.5	1154.8	3.0	72	15		
	930	BORD	41 F	1154.6	1154.7	2.4	79	3		
	808	ONDR	8 S	1155.3	1155.3	.2	28			
	810	KRAK	42 SER	1155.5	1155.6	1.2	700			
	9400	HUAN	PBI	1159.9	1159.9	22.3	13.5	4.9		0
	930	BORD	8 S	1340.0	1340.3	.1	13	1		
	1470	POTS	8 S	1340.0	1340.2	.5	3.6			
	5200	BERN	20 GRF	1411.5	1430.6	80.0	15.0			
	3200	BERN	20 GRF	1411.5	1430.5	80.0	.0			ONLY PAPER REC
	9400	HUAN	S	1412.2	1413.0	2.0	16.9	9.9		R
	930	BORD	41 F	1412.2	1412.2	1.4	39	2		
	3000	POTS	3 S	1412.5	1412.7	1.0	16			
	1470	POTS	3 S	1412.5	1412.9	1.0	8.8			
	9500	POTS	3 S	1412.5	1413.0	2.5	15			
	9400	HUAN	PBI	1414.2	1414.2	25.4	5.1	3.5		R
	2650	DWIN	45 C	1529.0	1529.5	1.0	100	50		
	2800	OTTA	21 GRF	1530.0	1550	205.0	14.4	7.2		
	19600	BERN	4 S/F	1530.8	1535.5	24.0D	70.0			
	8400	BERN	4 S/F	1530.8	1535.5	48.0	77.0			
	11800	BERN	4 S/F	1530.8	1535.5	24.0	93.0			
	5200	BERN	4 S/F	1530.8	1535.5	50.0D	85.0			
	8400	BERN	4 S/F	1530.8	1535.5	48.0	77.0			
	3200	BERN	4 S/F	1531.0	1535.5	50.0D	.0			ONLY PAPER REC
	2800	OTTA	4 S/F	1534.0	1536.1	7.0	183.0	33.0		
	9400	HUAN	F	1534.2	1535.8	4.4	98.0	50.3		R
	9400	HUAN		1534.2	1536.4		82.8			R
	10715	DWIN	45 C	1535.0	1536	2.0	30	20		
	2650	DWIN	45 C	1535.0	1536	5.0	170	60		
	930	BORD	45 C	1535.2	1536.2	6.8	117	9		
	228	HARS	45 C	1535.3	1535.5	1.5	100	10		
	9400	HUAN	PBI	1538.6	1538.6	27.4	22.0	14.4		R
	9400	HUAN	S	1610.2	1725.0	131.1	20.3	8.9		0
	2800	OTTA	21 GRF	1645.0	1715	90.0	13.2	9.0		
	930	BORD	41 F	1648.2	1648.8	.8	14	2		
	2695	PENT	1 S	1702.0	1704	8.0	9.4	4.7		
	2800	OTTA	8 S	1914.9	1914.9	.2	15.8			
	9400	HUAN	S	1915.7	1916.3	2.1	16.9	10.1		0
	2800	OTTA	3 S	1916.0	1916.4	1.5	11.8	6.0		
	2800	OTTA	29 PBI	1917.5	1917.5	9.0	3.6	1.8		
	9400	HUAN	PBI	1917.8	1917.8	9.5	6.8	4.4		0
	2800	OTTA	4 S/F	2023.0	2028.4	12.0	138.0	39.0		
	9400	HUAN	F	2023.2	2027.8	8.1	158.9	83.7		R
	9400	HUAN		2023.2	2028.4		191.0			R
	9400	HUAN	PBI	2031.3	2031.3	45.5	25.4	13.5		0
	2800	OTTA	29 PBI	2035.0	2035	65.0	7.2	3.6		
	3750	TYKW	45 C	2254.0	2257.5	11.0	22	8		
	2000	TYKW	45 C	2255.0	2257.4	7.0	21	6		
	9400	TYKW	45 C	2255.0	2257.4	17.0	18	7		
	2695	PENT	21 GRF	2255.0	2300	55.0	15.8	4.6		
	2695	PENT	3 S	2256.2	2257.4	1.8	22.8	5.7		
	2000	TYKW	29 PBI	2302.0		60.0	5	2		
	3750	TYKW	29 PBI	2305.0		65.0	9	4		
	9400	TYKW	29 PBI	2312.0		50.0	6	3		
09	200	HIRA	43 NS	0125.0	0229	170.0	7	2		WR
	260	ONDR	44 NS	0743.0E		429.0D	57	2		
	127	TORN	44 NS	0800.0E	1205.7	420.0D	200	1		V1
	204	IZMI	43 NS	0850.0		190.0	50			
	200	HIRA	44 NS	2038.0E	2245	690.0D	30	20		
	2000	TYKW	20 GRF	0050.0	0110	90.0	4	2		
	3750	TYKW	21 GRF	0050.0	0120	150.0	6	3		
	3750	TYKW	45 C	0232.0	0236.3	13.0	16	6		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
09	17000	NOBE	20	GRF	0232.6	0244.7	40.0	12			0
	9400	TYKW	45	C	0235.0	0240.6	10.0	16	7		
	2000	TYKW	45	C	0235.0	0240.7	9.0	5.5	2.5		
	1000	TYKW	5	S	0235.9	0236.1	1.0	3.5	1		
	1000	TYKW	45	C	0240.3	0240.6	1.0	15	5		
	1000	TYKW	5	S	0242.9	0243.0	.6	2	.5		
	2000	TYKW	29	PBI	0244.0		25.0	2	1		
	3750	TYKW	29	PBI	0245.0		30.0	6	3		
	9400	TYKW	29	PBI	0245.0		35.0	8	4		
	1000	TYKW	5	S	0245.0	0246.4	3.0	2.5	.8		
	2000	TYKW	5	S	0347.0	0347.9	1.0	4	1		
	2000	TYKW	5	S	0349.5	0350	1.0	2	.5		
	2000	TYKW	45	C	0352.5	0353.2	2.5	10	2.5		
	1000	TYKW	45	C	0355.0	0357.7	5.0	11	2.5		
	3750	TYKW	5	S	0355.0	0358.6	10.0	20	6		
	2000	TYKW	45	C	0355.0	0358.0	5.0	410	50		
	9400	TYKW	45	C	0356.0	0358.5	10.0	14	4		
	2000	TYKW	29	PBI	0400.0		10.0	10	5		
	3750	TYKW	30	PBI	0405.0		15.0	2	1		
	3750	TYKW	5	S	0413.6	0414.0	1.0	8	1.5		
	3100	CRIM	25	R	0633.0	0804.0		14			
	3200	BERN	3	S	0719.0	0743.3	57.0	.0			ONLY PAPER REC
	5200	BERN	3	S	0719.0	0743.4	57.0	20.0			
	2950	GORK	21	GRF	0721.0	0745.0	119.0	7			
	9100	GORK	21	GRF	0731.2	0745.0	56.0	12	6		
	9500	POTS	3	S	0742.5	0743.5	3.5	9.5			
	234	POTS	4	S/F	0742.8	0743.2	.5	240	5		
	3000	POTS	3	S	0743.0	0743.5	2.0	16			
	9100	GORK	1	S	0743.1	0743.6	1.8	12	6		
	2950	GORK	1	S	0743.2	0743.7	1.8	11			
	950	GORK	1	S	0745.0	0746.5	4.1	2.6			
	650	GORK	1	S	0745.0	0746.4	1.7	5			
	3100	CRIM	1	S	0753.0	0753.7	2.0	14	5		
	2950	GORK	1	S	0755.5	0755.7	.6	5			
	234	POTS	42	SER	0806.2	0807.0	5.2	500	2		
	9100	GORK	20	GRF	0839.0	0905.0	51.0	5	2.5		
	234	POTS	42	SER	0841.3	0853.9	14.0	250	1 E		
	9100	GORK	1	S	0946.2	0947.2	6.4	5	2.6		
	3200	BERN	47	GB	1109.0	1124.6	93.0	.0			ONLY PAPER REC
	3100	CRIM	1	S	1109.5	1111.0	6.0	20	6		
	9100	GORK	21	GRF	1109.5		80.0E				
	2950	GORK	21	GRF	1109.6	1145.0	80.0E	25			
	9400	HUAN		S	1109.8	1110.6	1.8	18.5	8.4		0
	2650	DWIN	8	S	1111.0			40			
	10715	DWIN	47	GB	1123.0	1129	27.0	330 D			
	2650	DWIN	47	GB	1123.0	1125	27.0	340	150		
	3100	CRIM	47	GB	1123.0	1125.0	17.0	340			
	3100	CRIM			1123.0	1128.3		400	130		
	35000	BERN	47	GB	1123.1	1124.8	93.0U	458.0			
	8400	BERN	47	GB	1123.1	1124.8	93.0U	1015.0			
	9400	HUAN		GB	1123.5	1124.8	7.1	1587.6	579.1		R
	11800	BERN	47	GB	1123.5	1124.8	93.0U	1087.0			
	19600	BERN	47	GB	1123.5	1124.8	93.0U	1048.0			
	5200	BERN	47	GB	1123.5	1125.0	93.0	657.0			
	9100	GORK	46	C	1123.6	1125.0	9.3	1200			
	9100	GORK			1123.6	1128.5		720			
	2950	GORK	45	C	1124.0	1125.1	9.0	280			
	3000	POTS	29	PBI	1124.0	1128.5	171.0	1100			
	1470	POTS	29	PBI	1124.0	1128.9	141.0	97			
	9500	POTS	29	PBI	1124.0	1124.8	176.0	1080			
	2950	GORK			1124.0	1128.5		350			
	930	BORD	46	C	1124.0	1128.6	11.0	137	5		
	808	ONDR	45	C	1124.2	1128.7	6.5	22	5.4		
	950	GORK	23	GRF	1125.7	1130.8	21.0	8			
	650	GORK	21	GRF	1127.0		25.6	2			
	950	GORK	4	S/F	1127.6	1128.7	3.1	70			
	810	KRAK	4	S/F	1127.7	1128.7	3.0	28	4		
	650	GORK	1	S	1128.1	1128.2	1.1	4.6			
	9400	HUAN		PBI	1130.6	1130.6	163.5	152.9	25.3		R
	3100	CRIM	29	PBI	1140.0	1140.0	80.0D	19			
	9100	GORK	2	S/F	1141.8	1144.6	5.5	19			
	930	BORD	46	C	1142.0	1144.7	5.0	118	3		
	3100	CRIM	1	S	1142.0	1145.0	6.0	7	2		
	536	ONDR	42	SER	1142.0	1145.8	10.0	20			
	33	UPIC	42	SER	1142.6	1146.1U	6.0				
	29	UPIC	42	SER	1143.1	1148	5.2				
	808	ONDR	2	S/F	1143.6	1144.7	3.0	25	4		
	430	KRAK			1144.0	1146.2		140			
	430	KRAK	42	SER	1144.0	1144.6	2.3	170			
	950	GORK	4	S/F	1144.3	1144.9	1.7	43			
	810	KRAK	4	S/F	1144.5	1144.8	1.5	76	3		
	650	GORK	4	S/F	1144.5	1144.8	2.0	24			
	2800	OTTA	20	GRF	1200.0	1300	195.0	18.4	10.0		
	536	ONDR	8	S	1237.2	1237.2	.2	27			
	3200	BERN	20	GRF	1246.0	1319.5	100.0	.0			ONLY PAPER REC

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
09	5200	BERN	20	GRF	1246.0	1319.7	100.0	11.0			
	536	ONDR	8	S	1323.8	1323.8	.2	18			
	2800	OTTA	22	GRF	1655.0	1715	45.0	4.0	1.8		
	2800	OTTA	21	GRF	1955.0	2105	135.0	6.4	3.2		
	2800	OTTA	1	S	1957.0	1959.5	7.0	5.6	2.4		
	9400	HUAN		S	1958.6	1959.2	1.1	17.7	9.2		R
	9400	TYKW	5	S	2219.0	2220	9.0	20	6		
	3750	TYKW	21	GRF	2315.0	2325	40.0	2	1		
	9400	TYKW	5	S	2333.0	2336	7.0	4	2		
	3750	TYKW	5	S	2350.0	2351	3.0	2	.7		
	9400	TYKW	5	S	2350.0	2351	3.0	3	1		
10	200	GORK	44	NS	0511.0E		473.0D		5		
	260	ONDR	44	NS	0850.0E		368.0D	18			
	2800	TYKW	21	GRF	0013.0	0120	145.0	9	5		
	3750	TYKW	21	GRF	0016.0	0045	145.0	10	5.5		
	9400	TYKW	21	GRF	0017.0	0050	130.0	4	2		
	2800	TYKW	45	C	0018.9	0019.0	.6	11	5		
	1000	TYKW	21	GRF	0020.0	0120	140.0	3	1.5		
	1000	TYKW	8	S	0105.4	0105.6	.4	9	2		
	100	HIRA	7	C	0124.2	0126.7	4.0	340	45		0
	9400	TYKW	5	S	0126.0	0126.9	2.0	17	4		
	3750	TYKW	5	S	0126.0	0126.9	2.0	39	9		
	2800	TYKW	5	S	0126.5	0126.9	1.5	12	4		
	5730	IRKU	2	S	0126.6	0126.9	3.0	42	11		R
	2800	TYKW	29	PBI	0128.0		23.0	2	1.5		
	3750	TYKW	29	PBI	0128.0		25.0	4	2		
	9400	TYKW	29	PBI	0128.0		20.0	4	2		
	1000	TYKW	8	S	0250.8	0250.9	.4	12	2		
	2800	TYKW	21	GRF	0300.0	0320	90.0	5	3		
	9400	TYKW	21	GRF	0300.0	0320	90.0	5	2.5		
	2800	TYKW	5	S	0301.0	0302	2.0	3	1		
	9400	TYKW	5	S	0301.0	0301.4	2.0	4.5	1.5		
	3750	TYKW	21	GRF	0303.0E	0319	87.0D	10	4	D	
	1000	TYKW	45	C	0330.0	0334.9	9.0	4	1.5		
	2800	TYKW	45	C	0330.0	0334.8	11.0	13	4.5		
	3750	TYKW	45	C	0330.0	0334.8	11.0	17	5		
	5730	IRKU			0330.5	0335.8		15			L
	5730	IRKU	21	GRF	0330.5	0333.4	8.0	13	8		L
	9400	TYKW	5	S	0331.0	0334.5	10.0	6	1.5		
	1000	TYKW	5	S	0346.5	0346.7	1.5	3.5	1		
	9400	TYKW	20	GRF	0440.0	0459	60.0	3	1.5		
	2800	TYKW	20	GRF	0440.0	0455	30.0	2	1		
	3750	TYKW	20	GRF	0440.0	0455	40.0	4.5	1.5		
	3750	TYKW	5	S	0542.3	0542.6	1.0	11	2.5		
	3100	CRIM	25	R	0550.0	0650.5		18			
	9400	TYKW	20	GRF	0620.0	0640	60.0U	12	6	U	
	2800	TYKW	20	GRF	0620.0	0640	60.0U	4	2	U	
	2950	GORK	20	GRF	0620.3	0650.2	233.0	11	5		
	9100	GORK	20	GRF	0622.5	0633.7	62.5	14	5		
	3200	BERN	20	GRF	0648.0	0650.0	28.0	.0			ONLY PAPER REC
	5200	BERN	20	GRF	0648.1	0650.1	28.0	8.0			
	1470	POTS	1	S	0744.4	0745.5	1.6	4.4			
	3100	CRIM	21	GRF	0941.0	0944.0	10.0	3	1		
	3100	CRIM	1	S	0947.0	0947.5	1.0	7	1		
	228	HARS	45	C	0959.0	0959.7	4.0	410	10		
	2950	GORK	20	GRF	1042.0	1050.5	110.0E	11	6		
	3200	BERN	22	GRF	1043.5	1050.1	72.0	.0			ONLY PAPER REC
	11800	BERN	22	GRF	1044.0	1106.2	72.0U	36.0			
	5200	BERN	22	GRF	1044.0	1053.6	72.0	12.0			
	9100	GORK	21	GRF	1044.6	1054.3	108.0E	16			
	9100	GORK	2	S/F	1049.8	1053.8	4.4	27			
	9500	POTS	42	SER	1050.0	1053.9	5.0	22			
	3100	CRIM	1	S	1147.5	1149.5	7.0	11	4		
	3100	CRIM	29	PBI	1149.5	1149.5		6			
	9400	HUAN		S	1237.4	1240.5	10.3	8.3	2.8		0
	9500	POTS	1	S	1238.0	1239.5	2.0U	6.0			
	5200	BERN	20	GRF	1254.0	1323.5U	80.0	12.0			ONLY PAPER REC
	3200	BERN	20	GRF	1254.0	1323.5U	80.0	.0			ONLY PAPER REC
	2800	OTTA	22	GRF	1300.0	1323	90.0	10.0	4.6		
	3200	BERN	1	S	1509.0	1510.7	9.0	.0			ONLY PAPER REC
	5200	BERN	1	S	1509.0	1510.7	9.0	10.0			ONLY PAPER REC
	2800	OTTA	1	S	1510.0	1511	2.0	2.4	1.2		
	2800	OTTA	20	GRF	1700.0	1707	50.0	4.0	2.8		
	2800	OTTA	20	GRF	1800.0	1810	22.0	3.6	1.8		
	9400	HUAN		S	1918.1	1918.8	2.2	31.6	14.6		0
	2800	OTTA	240	R	1920.0	1955	35.0	6.8	3.8		
	9400	HUAN		PBI	1920.3	1920.3	11.7	6.6	4.2		0
	9400	HUAN		S	1943.3	1945.0	3.3	26.6	10.0		0
	2695	PENT	8	S	2011.8	2011.8	.1	13.8			
	9400	HUAN		S	2044.0	2047.3U	6.3	10.0	5.0		0
	2800	OTTA	21	GRF	2104.0	2110	25.0	3.6			
	2800	OTTA	3	S	2104.2	2105.2	3.0	15.8	5.4		
	2695	PENT	20	GRF	2145.0	2215	95.0	6.8	3.5		
	2800	TYKW	20	GRF	2150.0	2157	U 80.0	6	U 3		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
10	3750	TYKW	20	GRF	2150.0	2157 U	80.0	11 U	5		
	1000	TYKW	45	C	2218.2	2219.0	2.0	15	5		
	9400	TYKW	21	GRF	2340.0	2450	140.0	5	2.5		
	3750	TYKW	21	GRF	2340.0	2450	150.0	10	4.5		
	2000	TYKW	21	GRF	2340.0	2450	150.0	5.5	2.5		
11	200	HIRA	44	NS	0018.0E	0638	480.0D	15	5		MR
	200	GORK	44	NS	0430.0E		265.0D		5		
	127	TORN	43	NS	0720.0	0956.6	460.0	290			V1
	260	ONDR	44	NS	0920.0E		300.0D	17			
	200	HIRA	44	NS	2040.0E	2347	680.0D	85	40		WL
	100	HIRA	44	NS	2040.0E	0114	680.0D	1500	100		SL
	2000	TYKW	5	S	0047.0	0047.0	1.5	1.5	.5		
	3750	TYKW	5	S	0047.0	0047.8	2.0	4	1		
	9400	TYKW	5	S	0047.5	0047.7	1.5	3.5	1.5		
	3750	TYKW	45	C	0123.0	0129.1	25.0	5	1.5		
	9400	TYKW	45	C	0128.0	0133	10.0	4.5	1.5		
	3750	TYKW	21	GRF	0223.0	0305	60.0	5	2.5		
	9400	TYKW	20	GRF	0223.0	0233	30.0	5	2.5		
	3750	TYKW	5	S	0224.0	0225	15.0	3.5	1.5		
	2000	TYKW	20	GRF	0235.0	0309	45.0	2	.5		
	9400	TYKW	5	S	0311.0	0313	20.0	4	2		
	9400	TYKW	28	PRE	0340.0	0357	17.0	9	3		
	3750	TYKW	28	PRE	0340.0	0352	17.0	6	3		
	2000	TYKW	28	PRE	0342.0	0345	15.0	2	1		
	9400	TYKW	45	C	0357.0	0357.6	10.0	140	30		
	2000	TYKW	45	C	0357.0	0357.7	10.0	32	6		
	3750	TYKW	45	C	0357.0	0357.6	10.0	48	15		
	17000	NOBE	3	S	0357.1	0357.7	9.3	30			0
	1000	TYKW	45	C	0357.5	0357.7	9.0	3.5	1		
	35000	NAGO	20	GRF	0358.0	0402	32.0	56			
	3750	TYKW	29	PBI	0407.0		45.0	11	6		
	9400	TYKW	29	PBI	0407.0		45.0	27	13		
	2000	TYKW	29	PBI	0407.0		45.0	2	1		
	100	HIRA	41	F	0413.1	0414.0	1.8	620			
	9100	GORK	21	GRF	0424.0E		146.0D				
	2950	GORK	20	GRF	0427.0E	0428.7	410.0E	30	15		
	3750	TYKW	20	GRF	0503.0	0505	30.0	4	2		
	9400	TYKW	21	GRF	0503.0	0510	40.0	4	2		
	9100	GORK	2	S/F	0530.7	0531.3	1.4	11			
	9400	TYKW	5	S	0531.0	0531.6	2.0	10	3		
	9400	TYKW	21	GRF	0545.0	0550	65.0	6	2		
	3750	TYKW	45	C	0545.0	0546.7	4.0	11	5		
	3750	TYKW	29	PBI	0549.0		25.0D	4	3	D	
	9400	TYKW	45	C	0610.3	0610.4	3.0	13	4		
	9100	GORK	1	S	0610.4	0610.6	1.7	16	8		
	9100	GORK	20	GRF	0812.9	0820.0	18.7	15	5		
	1470	POTS	3	S	0814.5	0843		16			
	9500	POTS	1	S	0814.5	0814.9	1.5	7.0			
	9500	POTS	3	S	0814.5	0845.7		21			
	3100	CRIM	3	S	0835.0	0845.0	16.0	24	8		
	5200	BERN	3	S	0838.0	0845.7	14.0	28.0			ONLY PAPER REC
	930	BORD	42	SER	0838.0	0841.8	5.0	100	3		
	3200	BERN	3	S	0838.0	0845.2	14.0	.0			ONLY PAPER REC
	9100	GORK	20	GRF	0839.0	0845.7	18.0	28	10		
	430	KRAK			0839.5	0846.2		120			
	430	KRAK	42	SER	0839.5	0840.0	7.5	90	2		
	430	KRAK			0839.5	0843.0		210			
	810	KRAK	1	S	0842.3	0842.7	1.0	11	4		
	5730	IRKU	20	GRF	0843.0	0845.4	6.0	32	16		L
	5730	IRKU			0843.0	0847.3		19			L
	3100	CRIM	24	R	0900.0	0922.5		17			
	5200	BERN	41	F	1218.0	1324.5	30.0	21.0			ONLY PAPER REC
	430	KRAK	2	S/F	1236.0	1236.5	1.2	18	2		
	9400	HUAN		S	1304.0	1304.5	2.4	19.7	12.0		R
	9500	POTS	29	PBI	1304.3	1304.9	11.0	15			
	2800	OTTA	21	GRF	1305.0	1420	105.0	7.2	4.0		
	3200	BERN	41	F	1318.0	1324.5	30.0	.0			ONLY PAPER REC
	930	BORD	41	F	1322.4	1323.6	1.5	32	2		
	536	ONDR	2	S/F	1323.4	1324.3	2.0	35	3		
	808	ONDR	2	S/F	1324.0	1324.3	.5	18			
	1470	POTS	1	S	1324.0	1324.0	1.5	5.9			
	2800	OTTA	3	S	1324.8	1325	1.0	15.8	7.6		
	9400	HUAN		S	1336.4	1337.4	2.4	17.9	6.3		R
	2800	OTTA	20	GRF	1520.0	1537	45.0	4.4	2.2		
	2695	PENT	20	GRF	1655.0	1700	12.0	2.4	1.2		
	2800	OTTA	22	GRF	1730.0	1835	195.0	8.2	4.1		
	9400	HUAN		S	1740.1	1741.6	3.0	148.7	76.9		R
	9400	HUAN		PBI	1743.1	1743.1	62.9	26.9	7.2		R
	9400	HUAN		S	1937.3	2018.6	56.8	12.5	5.2		0
	2800	OTTA	240	AR	2104.0	2111	6.0	4.8	2.4		
	2800	OTTA	1	S	2107.0	2108	3.8	5.4	2.8		
	2695	PENT	1	S	2203.0	2203.3	1.5	5.2	2.6		
	2000	TYKW	5	S	2203.0	2203.2	1.5	6	2		
	3750	TYKW	21	GRF	2215.0	2300	165.0	9	4		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
11	2000	TYKW	21 GRF	2220.0	2300	160.0	3	1.5		
	1000	TYKW	5 S	2223.7	2223.9	.8	5	1.5		
	9400	TYKW	5 S	2254.3	2254.7	3.0	7	2		
	3750	TYKW	5 S	2312.0	2315.4	20.0	6	2		
	9400	TYKW	45 C	2314.0	2315.5	6.0	5	2		
	2000	TYKW	21 GRF	2342.0	0015	70.0	2	1		
	3750	TYKW	21 GRF	2342.0	0009	70.0	9	5		
	3750	TYKW	45 C	2344.0	2344.8	5.0	9	1.5		
	9400	TYKW	5 S	2344.0	2348	16.0	5	2.5		
	2000	TYKW	5 S	2344.5	2344.8	1.0	6	1.5		
	1000	TYKW	5 S	2344.5	2344.7	.8	13	2.5		
	2695	PENT	1 S	2344.9	2345	1.0	8.6	4.0		
	1000	TYKW	8 S	2353.1	2353.3	.3	10	1.5		
	1000	TYKW	8 S	2353.6	2353.7	.2	13	3		
	1000	TYKW	8 S	2353.9	2354.0	.2	33	6		
	1000	TYKW	8 S	2354.9	2355.0	.3	60	10		
	3750	TYKW	45 C	2356.3	2356.7	7.0	4.5	2	D	
12	200	GORK	44 NS	0554.0E		183.0D		5		
	100	GORK	43 NS	0609.0		180.0E		50		
	127	TORN	44 NS	0610.0E	0816.9	450.0D	960	2		V1
	260	ONDR	44 NS	0811.0E		391.0D	32	2		
	430	KRAK	43 NS	1159.0	1245.2	121.0D	170	11		
	200	HIRA	44 NS	2040.0E	2248	680.0D	8	2		
	3750	TYKW	5 S	0006.5	0007.3	1.0	5	2		
	9400	TYKW	21 GRF	0007.0E	0020	40.0D	4	2	D	
	9400	TYKW	5 S	0007.0E	0007.2	2.0D	7	2	D	
	3750	TYKW	5 S	0012.0	0013.3	3.0	4	2		
	3750	TYKW	5 S	0106.0	0107.3	4.0	6	2		
	9400	TYKW	5 S	0106.0	0108	8.0	3	1.5		
	3750	TYKW	30 PBI	0110.0		15.0	2	1		
	3750	TYKW	5 S	0117.0	0117.4	1.5	1.5	.5		
	9400	TYKW	5 S	0124.0	0125	3.0	3	1.5		
	3750	TYKW	5 S	0131.0	0132.1	2.0	9	3		
	9400	TYKW	5 S	0131.7	0132.1	1.3	4.5	2		
	2000	TYKW	5 S	0131.7	0132.1	1.0	2	.7		
	2000	TYKW	5 S	0133.0	0138.3	10.0	4	1		
	3750	TYKW	30 PBI	0133.0		17.0	2	1		
	1000	TYKW	5 S	0138.0	0138.3	1.0	2	.7		
	9400	TYKW	5 S	0138.0	0138.3	1.0	2	1		
	3750	TYKW	5 S	0138.0	0138.3	1.0	2.5	1		
	3750	TYKW	5 S	0146.0	0148.2	3.0	2	1		
	2000	TYKW	45 C	0152.0	0157.3	8.0	4	1.5		
	9400	TYKW	45 C	0155.0	0159.5	5.0	20	4		
	3750	TYKW	45 C	0155.0	0159.5	5.0	21	6		
	1000	TYKW	8 S	0158.7	0158.8	.2	9	2		
	1000	TYKW	8 S	0159.2	0159.3	.2	10	3		
	9400	TYKW	29 PBI	0200.0		50.0	6	2		
	2000	TYKW	29 PBI	0200.0		90.0	2.5	1		
	3750	TYKW	30 PBI	0200.0		90.0	8	3		
	1000	TYKW	8 S	0200.9	0201.0	.2	18	4		
	1000	TYKW	8 S	0220.8	0220.9	.2	8	2		
	9400	TYKW	20 GRF	0256.0	0303.5	35.0	4	2		
	3750	TYKW	5 S	0303.0E	0303.3	20.0D	6	2		
	3750	TYKW	45 C	0420.0	0430.4	30.0	6	1.5		
	2000	TYKW	21 GRF	0420.0	0440	120.0	1.5	.7		
	1000	TYKW	8 S	0426.1	0426.2	.4	10	2		
	2000	TYKW	8 S	0426.7	0426.8	.2	4	1		
	1000	TYKW	8 S	0426.8	0426.9	.2	31	8		
	1000	TYKW	45 C	0427.5	0427.9	1.0	17	3		
	2000	TYKW	45 C	0428.0	0428.3	.5	5	.5		
	1000	TYKW	8 S	0428.9	0429.0	.2	15	4		
	1000	TYKW	45 C	0429.3	0430.0	6.0	15	1.5		
	2000	TYKW	45 C	0430.0	0430.1	2.1	8	2.5		
	3750	TYKW	28 PRE	0506.0	0508	9.0	3.5	2		
	9100	GORK	21 GRF	0512.2	0518.8	87.0	8	3		
	9400	TYKW	5 S	0515.0	0519	18.0	5	2		
	3750	TYKW	5 S	0515.0	0519	15.0	12	5		
	3750	TYKW	29 PBI	0530.0		50.0	3	1.5		
	9400	TYKW	5 S	0538.0	0539.2	5.0	10	2		
	9100	GORK	2 S/F	0538.0	0539.3	1.0	18			
	1000	TYKW	45 C	0559.0	0600.0U	1.0D	18	2	D	
	9400	TYKW	45 C	0600.3	0601.4	2.0	10	2		
	2000	TYKW	45 C	0600.3	0601.4	2.0	9	2		
	9100	GORK	21 GRF	0647.9		264.0E				
	9100	GORK	1 S	0650.0	0650.3	.5	8	4		
	3200	BERN	20 GRF	0715.0	0728.2	28.0	.0			ONLY PAPER REC
	1000	TYKW	45 C	0715.5	0715.7	1.0	20	4		
	2950	GORK	20 GRF	0721.0	0728.2	42.5	9.7			
	9100	GORK	2 S/F	0727.5	0728.9	2.2	10			
	9500	POTS	1 S	0727.5	0728.9	4.0	9.7			
	1470	POTS	1 S	0728.0	0728.2	1.0	4.1			
	3100	CRIM	3 S	0729.0	0729.0	10.0	6	714		
	3100	CRIM	29 PBI	0732.0	0927.0	7.0	8	10		
	810	KRAK	4 S/F	0756.0	0756.5	.5	100	2		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
12	430	KRAK		0812.5	0823.0		45			
	430	KRAK	45 C	0812.5	0812.7	22.5	66	23		
	430	KRAK		0812.5	0828.0		58			
	810	KRAK	8 S	0822.0	0822.0	.2	19			
	810	KRAK		0826.5	0832.0		100			
	810	KRAK	45 C	0826.5	0829.0	8.5	270	15		
	430	KRAK	45 C	0845.7	0848.0	5.8	90	22		
	810	KRAK	27 RF	0845.8	0856.0	13.0	22	6		
	430	KRAK	27 RF	0851.5	0858.3	13.0	10	8		
	650	GORK	21 GRF	0903.0		42.0	2			
	2950	GORK	20 GRF	0903.0	0951.0	116.0	9			
	930	BORD	41 F	0914.3	0914.6	.5	127	3		
	808	ONDR	41 F	0914.5	0931.5	30.0	38	9		
	536	ONDR	41 F	0923.0	0929.8	25.5	25	7		
	930	BORD	46 C	0928.0	0931.3	4.5	139	5		
	650	GORK		0928.5	0931.4		21			
	650	GORK	46 C	0928.5	0929.8	5.9	32			
	29	UPIC	41 F	0928.6	0938.6	32.7				
	950	GORK	29 PBI	0928.8	0943.5	17.6	9			
	950	GORK		0928.8	0941.5		30			
	950	GORK	46 C	0928.8	0931.3	15.9	36			
	33	UPIC	41 F	0930.5	0930.9	13.6				
	930	BORD	46 C	0936.0	0941.5	8.0	45	5		
	1470	POTS	40 F	0936.0	0938	9.0	18			
	650	GORK		0936.5	0940.6		14			
	650	GORK	46 C	0936.5	0937.4	7.2	16			
	228	HARS	45 C	0941.0	0941.2	3.0	30	11		
	430	KRAK	8 S	1003.5	1003.5	.1	66			
	810	KRAK	41 F	1027.8	1028.4	4.0	28	2		
	9100	GORK	3 S	1034.5	1034.7	1.5	46	23		
	930	BORD	42 SER	1046.5	1055.1	9.5	100	3		
	9500	POTS	29 PBI	1102.0	1102.5	43.0	14			
	9100	GORK	2 S/F	1102.1	1102.5	1.0	12			
	810	KRAK	42 SER	1115.5	1118.5	4.0	85			
	930	BORD	42 SER	1117.8	1118.6	4.1	157	4		
	10715	DWIN	1 S	1134.0	1034.5	2.0	15	10		
	127	TORN	4 S/F	1148.0	1149.4	1.3	2400	1200		
	228	HARS	45 C	1149.0	1149.2	.7	480	40		
	113	POTS	4 S/F	1149.1	1149.2	1.0	140	15		III
	234	POTS	4 S/F	1149.1	1149.2	.5	1500	400		III
	33	UPIC	4 S/F	1149.1	1149.1	.5				
	29	UPIC	4 S/F	1149.2	1149.4	.5				
	204	IZMI	5 S	1149.5	1150.0	1.0	1085	550		
	810	KRAK	42 SER	1208.0	1209.4	1.5	110			
	930	BORD	41 F	1210.5	1211.4	1.8	54	2		
	810	KRAK	8 S	1216.3	1216.3	.2	47			
	930	BORD	41 F	1219.3	1219.3	.6	12	2		
	930	BORD	41 F	1233.0	1233.7	.7	10	2		
	536	ONDR	42 SER	1239.0	1239	.2	31			
	2800	OTTA	240 R	1300.0	1310	10.0	4.6	2.3		
	228	HARS	45 C	1317.0	1319.6	3.0	225	17		
	810	KRAK	42 SER	1318.5	1320.5	2.5	200			
	930	BORD	42 SER	1320.6	1322.6	5.4	51	2		
	2800	OTTA	21 GRF	1350.0	1447	310.0	21.4	10.0		
	9400	HUAN	S	1404.2	1601.2	180.8	18.1	10.2		R
	5200	BERN	4 S/F	1404.3	1521.5	130.0	40.0			ONLY PAPER REC
	3200	BERN	4 S/F	1404.3	1521.5	130.0	.0			ONLY PAPER REC
	930	BORD	41 F	1410.7	1410.9	.3	40	2		
	228	HARS	45 C	1415.2	1415.9	1.0	40	13		
	930	BORD	8 S	1453.0	1453.4	.2	31	2		
	2800	OTTA	8 S	1453.5	1453.6	.8	4.6	2.3		
	930	BORD	8 S	1500.3	1500.4	.5	189	3		
	9400	HUAN	S	1508.3	1508.8	1.5	9.9	4.9		0
	228	HARS	45 C	1518.6	1521.0	5.0	170	32		
	930	BORD	45 C	1519.0	1521.7	5.0	48	12		
	2800	OTTA	4 S/F	1519.0	1521	6.0	65.0	13.0		
	2650	DWIN	2 S/F	1520.0	1521	3.0	50	20		
	9400	HUAN	S	1520.6	1521.2	1.8	23.1	16.2		0
	9400	HUAN	S	1553.0	1553.8	1.7	82.4	30.2		R
	10715	DWIN	1 S	1553.0	1554	2.0	20	10		
	930	BORD	42 SER	1633.0	1633.7	4.5	72	3		
	2800	OTTA	4 S/F	1636.5	1637.3	3.0	55.0	7.2		
	2800	OTTA	8 S	1656.1	1656.3	.5	3.2	1.6		
	9400	HUAN	S	1753.2	1821.8	52.1	6.6	5.2		R
	2800	OTTA	20 GRF	2140.0	2155	40.0	4.0	2.0		
	2695	PENT	20 GRF	2145.0	2155	20.0	2.8	1.4		
	2695	PENT	21 GRF	2240.0	2255	50.0	7.8	4.8		
	3750	TYKW	21 GRF	2240.0	2305	100.0	12	6		
	9400	TYKW	21 GRF	2240.0	2310	100.0	14	8		
	2695	PENT	1 S	2258.8	2259.1	2.0	2.0	1.0		
	9400	TYKW	5 S	2329.0	2329.8	2.0	7	2.5		
	3750	TYKW	20 GRF	2335.0	2350	40.0	4	2		
13	200	GORK	43 NS	0520.0		246.0E		5		
	260	ONDR	44 NS	0810.0E		407.0D	33			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
13	430	KRAK	43	NS	0811.3	0825.5	350.0D	230			
	200	HIRA	44	NS	2043.0E	2215	600.0D	7	3		
	9400	TYKW	5	S	0026.0	0028.6	4.0	13	4		
	3750	TYKW	5	S	0028.0	0028.6	2.0	2	.5		
	3750	TYKW	5	S	0030.0	0039	20.0	3	1		
	9400	TYKW	29	PBI	0030.0		12.0	3	1.5		
	3750	TYKW	28	PRE	0051.0	0116	25.0	3	1.5		
	2000	TYKW	20	GRF	0052.0	0128	95.0	4	2		
	9400	TYKW	20	GRF	0100.0	0135	60.0	8	4		
	3750	TYKW	45	C	0116.0	0128	28.0	13	7		
	3750	TYKW	29	PBI	0144.0		15.0	4	2		
	3750	TYKW	45	C	0225.0	0247.7	70.0	4	2		
	9400	TYKW	20	GRF	0230.0	0257	70.0	8	3		
	9400	TYKW	45	C	0412.0	0418	18.0	24	12		
	3750	TYKW	45	C	0412.0	0416.7	25.0	68	15		
	2930	VORO	3	S	0413.0	0416	12.0	65			
	2000	TYKW	45	C	0415.0	0416.0	30.0	34	10		
	9400	TYKW	29	PBI	0430.0		100.0	8	3		
	3750	TYKW	29	PBI	0437.0		90.0	4	2		
	2000	TYKW	30	PBI	0445.0		110.0	2	1		
	100	GORK			0615.0	0618.8		11700			
	100	GORK	46	C	0615.0	0618.1	4.8	12000			
	100	HIRA	48	C	0615.3	0617 U	7.2	100000 D	9100 D		
	204	IZMI	45	C	0615.8	0617.5	3.0	1000	400		
	113	POTS	4	S/F	0615.9	0617.1	6.1	20000	100		III
	1000	TYKW	45	C	0616.0	0618.2	6.0	23	5		
	2000	TYKW	5	S	0616.0	0617.6	8.0	48	8		
	650	GORK	46	C	0616.2	0617.2	7.8	41			
	650	GORK			0616.2	0619.2		21			
	500	HIRA	46	C	0616.2	0616.8	6.0	40	10		SR
	650	GORK			0616.2	0620.5		19			
	2950	GORK	3	S	0616.3	0617.5	2.2	51	25		
	200	HIRA	46	C	0616.4	0618.6	3.0	5600	265		WR
	200	GORK	4	S/F	0616.5	0618.5	3.0	870			
	3200	BERN	3	S	0616.5	0617.5	9.0	.0			ONLY PAPER REC
	5200	BERN	3	S	0616.5	0617.5	9.0	25.0			ONLY PAPER REC
	950	GORK			0616.6	0619.2		14			
	950	GORK	46	C	0616.6	0618.1	4.3	14			
	9400	TYKW	45	C	0617.0	0617.7	10.0	23	6		
	3750	TYKW	45	C	0617.0	0617.6	7.0	48	10		
	3100	CRIM	3	S	0617.0	0618.0	6.0	60	20		
	5730	IRKU	2	S	0617.0	0617.8	5.0	106	29		R
	9100	GORK	2	S/F	0617.3	0617.8	2.5	24			
	127	TORN	48	C	0618.4	0619.2	3.2	2700	610		
	2950	GORK	29	PBI	0618.5	0618.6	9.3	18			
	9100	GORK	30	PBI	0619.7	0619.7	18.2	6.7			
	100	GORK	46	C	0625.0	0626.0	3.0	150			
	100	GORK			0625.0	0626.9		150			
	9100	GORK	1	S	0625.6	0625.9	.8	5.5	2.5		
	3100	CRIM	21	GRF	0640.0	0824.0	260.0	32	11		
	9100	GORK	20	GRF	0647.2	0700.8	18.8	5.5	2.5		
	3200	BERN	20	GRF	0715.0	0825.1	129.0	.0			ONLY PAPER REC
	5200	BERN	20	GRF	0715.0	0825.1	129.0	21.0			ONLY PAPER REC
	930	BORD	8	S	0720.1	0720.2	.3	25	2		
	9100	GORK	21	GRF	0724.9	0824.4	305.0E	33			
	9500	POTS	20	GRF	0740.0	0828	110.0	30			
	1470	POTS	20	GRF	0740.0	0830	110.0	8.6			
	2950	GORK	21	GRF	0740.7	0824.0	164.0	13			
	430	KRAK			0811.3	1258.3		300			
	810	KRAK	2	S/F	0823.0	0823.4	.6	33	5		
	5200	BERN	4	S/F	0939.5	0942.1	13.0	38.0			ONLY PAPER REC
	3200	BERN	4	S/F	0939.5	0942.1	13.0	.0			ONLY PAPER REC
	3100	CRIM	3	S	0940.0	0941.0	4.0	30	10		
	2950	GORK	3	S	0942.6	0943.0	3.0	19	9		
	9100	GORK	4	S/F	0942.8	0943.8	1.5	40			
	3000	POTS	3	S	0943.0	0944	2.0	17			
	10715	DWIN	2	S/F	0943.0	0944	1.0	10	5		
	1470	POTS	1	S	0943.0	0943.5	4.0	4.0			
	2650	DWIN	2	S/F	0943.0	0944	2.0	20	10		
	9500	POTS	4	S/F	0943.0	0944.2	3.0	26			
	9500	POTS	3	S	1021.5	1021.9	1.2	16			
	204	IZMI	7	C	1111.3	1113.8	1.5	88	34		
	33	UPIC	45	C	1111.5		2.1				
	113	POTS	4	S/F	1111.5	1111.6	1.6	10000	300		III/V
	29	UPIC	45	C	1112.0	1112.8	1.8				
	9500	POTS	20	GRF	1150.0	1233	80.0	16			
	9400	HUAN		S	1151.6	1203.6	42.5	9.8	4.9		0
	810	KRAK	1	S	1243.8	1244.0	.3	11	2		
	2800	OTTA	20	GRF	1310.0	1320	30.0	3.0	1.5		
	9400	HUAN		S	1324.5	1333.5	17.7	8.2	4.3		0
	9500	POTS	3	S	1332.5	1333.0	1.5	14			
	10715	DWIN	1	S	1333.0	1333.5	2.0	7	5		
	810	KRAK	1	S	1352.5	1352.5	.3	20	3		
	9400	HUAN		S	1454.1	1521.0	66.0	9.8	4.2		R
	9400	HUAN		S	1502.5	1503.3	1.9	11.4	7.3		0

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
13	9400	HUAN	S	1547.6	1548.3	2.7	16.3	6.5		0
	2800	OTTA 20	GRF	1653.0	1700	15.0	3.4	1.7		
	9400	HUAN	S	1657.6	1715.6	57.5	6.5	3.0		0
	9400	HUAN	S	1907.7	1942.8	91.3	17.9	13.8		R
	9400	HUAN	S	1917.6	1918.6	3.5	19.6	7.2		R
	2800	OTTA 23	GRF	1925.0	2123	220.0	11.6	6.7		
	9400	HUAN	S	1931.3	1932.1	2.0	21.2	8.2		R
	2800	OTTA 1	S	1932.0	1932.5	2.0	4.0	2.2		
	2800	OTTA 1	S	1957.5	1958	2.5	3.6	2.4		
	2695	PENT 4	S/F	2010.0	2010.7	1.2	36.8	9.2		
	2800	TYKW 21	GRF	2150.0	2210	80.0	6	3		
	3750	TYKW 21	GRF	2150.0U	2210	80.0U	6 U	3 U		
	9400	TYKW 45	C	2213.0	2215.5	10.0	68	12		
	9400	HUAN	S	2213.7	2215.3	3.3	66.1	23.4		R
	3750	TYKW 45	C	2214.0	2215.5	8.0	29	6		
	2800	TYKW 5	S	2214.5	2215.3	3.0	6	2		
	2695	PENT 4	S/F	2214.7	2215	5.3	12.2	3.1		
	3750	TYKW 5	S	2240.0	2243	20.0	6	2		
	9400	TYKW 5	S	2240.0	2248	20.0	8	4		
	9400	TYKW 21	GRF	2320.0	2330	90.0	6	3		
	3750	TYKW 21	GRF	2320.0	2330	80.0	9	3		
	2800	TYKW 21	GRF	2320.0	2330	70.0	4	1.5		
	1000	TYKW 45	C	2323.3	2323.7	1.0	3	1		
	1000	TYKW 5	S	2337.4	2337.5	.8	12	3		
	9400	TYKW 5	S	2339.0	2339.2	1.0	5	1.5		
	3750	TYKW 5	S	2339.0	2339.2	3.0	5	1.5		
	3750	TYKW 45	C	2345.0	2347.5	20.0	6	2.5D		
	9400	TYKW 5	S	2346.0	2347	10.0	6	3		
14	200	GORK 44	NS	0504.0E		131.0D		10		
	204	IZMI 44	NS	0600.0E		360.0D	52			
	260	ONDR 44	NS	0756.0E		412.0D	67	3		
	127	TORN 44	NS	0800.0E	1000.8	420.0D	280	12		V1
	430	KRAK 44	NS	0800.0E	0804.8	360.0D	170			
	200	HIRA 44	NS	2046.0E	0530	600.0D	17	10		0
	1000	TYKW 45	C	0003.0E	0012.3	11.0D	8	1.5D		
	100	HIRA 42	SER	0006.7	0012.0	7.1	1900			ML
	200	HIRA		0007.0	0007.3		100			WL
	200	HIRA 46	C	0007.0	0011.6	6.5	215	68		WL
	3750	TYKW 45	C	0010.0	0011.6	3.0	40	10		
	2800	TYKW 45	C	0010.0	0012.0	4.0	14	3.5		
	9400	TYKW 5	S	0010.0	0011.8	4.0	12	5		
	2930	VORO 3	S	0010.0	0013	5.0	41			
	500	HIRA 46	C	0010.6	0011.8	2.0	28	8		SL
	3750	TYKW 29	PBI	0013.0		20.0	3	1.5		
	9400	TYKW 29	PBI	0014.0		10.0	4	2		
	9400	TYKW 5	S	0028.5	0029.1	1.5	5	1.5		
	3750	TYKW 45	C	0057.0	0059.3	11.0	3	1		
	2800	TYKW 5	S	0058.0	0059.7	8.0	4	1.5		
	9400	TYKW 5	S	0058.0	0059.5	10.0	3	1.5		
	2800	TYKW 45	C	0114.0	0125.2	25.0	8	3		
	3750	TYKW 21	GRF	0115.0	0200	65.0	4	2		
	3750	TYKW 45	C	0115.0	0123.3	20.0	10	3		
	9400	TYKW 45	C	0118.0	0122.5	15.0	5	1.5		
	9400	TYKW 45	C	0140.0	0158.6	30.0	10	2.5		
	3750	TYKW 5	S	0214.5	0215.0	1.5	3.5	1		
	9400	TYKW 5	S	0214.6	0214.9	.7	7	2		
	1000	TYKW 8	S	0214.7	0214.9	.3	88	20		
	3750	TYKW 5	S	0237.0	0237.7	2.0	9	2		
	3750	TYKW 45	C	0243.0	0245.6	27.0	14	5		
	2800	TYKW 20	GRF	0245.0	0254.5	80.0	6	2		
	3750	TYKW 29	PBI	0310.0		55.0	5	2.5		
	1000	TYKW 5	S	0337.0	0337.5	1.0	10	1.5		
	9400	TYKW 5	S	0413.0	0413.2	.6	72	20		
	17000	NOBE 0	S	0413.2	0413.3	.4	31			0
	3750	TYKW 45	C	0419.0	0441	45.0	16	6		
	2800	TYKW 20	GRF	0430.0	0441	40.0	3	1		
	9100	GORK 21	GRF	0538.6	0630.0	400.0E	95			
	2950	GORK 21	GRF	0540.3	0630.0	176.0	48			
	3750	TYKW		0541.0	0619.6		200			
	9400	TYKW		0541.0	0542.7		380 U			
	2800	TYKW 5	S	0541.0	0542.2	8.0	84	25		
	9400	TYKW 45	C	0541.0	0608.3	50.0D	460 U	50 D		RAIN
	3750	TYKW 45	C	0541.0	0608.3	55.0	225	60		
	3750	TYKW		0541.0	0542.8		185			
	1000	TYKW 45	C	0541.0	0543.1	8.0	148	7		
	9100	GORK 45	C	0541.2	0541.6	5.2	140			
	9100	GORK		0541.2	0542.1		230			
	2950	GORK 3	S	0541.3	0543.0	3.6	120			
	950	GORK 4	S/F	0541.3	0542.8	6.0	100			
	17000	NOBE 45	C	0541.5	0542.8	3.0	334			R
	5730	IRKU		0541.5	0608.1		478			L
	5730	IRKU		0541.5	0619.3		136			L
	5730	IRKU		0541.5	0607.0		225			L
	5730	IRKU		0541.5	0602.3		178			L

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
14	5730	IRKU			0541.5	0614.0		143			L
	5730	IRKU			0541.5	0609.1		407			L
	5730	IRKU	45	C	0541.5	0543.0	40.0U	320 D			L
	5730	IRKU			0541.5	0546.3		220			L
	2800	TYKW	30	PBI	0549.0		13.0	8	7		
	1000	TYKW	30	PBI	0549.0		16.0	1.5	1.5		
	9100	GORK			0557.6	0606.2		175			
	9100	GORK			0557.6	0607.0		140			
	9100	GORK			0557.6	0608.0		370			
	9100	GORK	45	C	0557.6	0602.0	12.0	135			
	3100	CRIM	45	C	0600.0E	0620.0	24.0D	266 U			
	2800	TYKW	45	C	0602.0	0619.2	25.0	225	40 D		
	2950	GORK	46	C	0604.8	0608.3	6.6	170			
	2950	GORK			0604.8	0609.1		135			
	1000	TYKW	45	C	0605.0	0619.5	20.0	70	15		
	1000	TYKW			0605.0	0608.4		47			
	950	GORK	29	PBI	0606.0	0622.3	230.0E	12			
	950	GORK	46	C	0606.0	0608.0	16.2	80			
	950	GORK			0606.0	0619.8		50			
	650	GORK	23	GRF	0607.4	0839.2	248.0E	16			
	650	GORK			0607.7	0611.0		21			
	650	GORK			0607.7	0619.7		70			
	650	GORK	46	C	0607.7	0609.1	16.3	31			
	650	GORK			0607.7	0614.2		11			
	2950	GORK	3	S	0612.8	0614.1	2.6	99			
	9100	GORK	3	S	0613.2	0614.0	2.3	36	18		
	100	HIRA	42	SER	0615.6	0617.0	42.0	260			0
	500	HIRA	4	S/F	0617.4	0620.1	6.5	73	50		ML
	200	GORK	41	F	0617.5	0618.7	71.5	60			
	200	GORK			0617.5	0715.8		60 D			
	200	GORK			0617.5	0654.8		60 D			
	200	HIRA	42	SER	0617.6	0654.6	41.0	230			0
	2950	GORK	3	S	0617.7	0619.2	5.7	250			
	9100	GORK	3	S	0618.3	0618.3	2.6	28	14		
	3100	CRIM	30	PBI	0624.0	0624.0	122.0	28			
	1000	TYKW	29	PBI	0625.0		60.0D	13	11 D		
	2000	TYKW	29	PBI	0627.0		60.0D	37	28 D		
	3750	TYKW	29	PBI	0636.0		50.0D	30	15 D		
	204	IZMI	46	C	0657.0	0658.5	3.0	146	100		
	204	IZMI	46	C	0726.0	0727.2	4.0	300	160		
	228	HARS	46	C	0727.0	0727.8	2.6	380	75		
	234	POTS	4	S/F	0727.4	0728.7	1.8	720	30		III
	113	POTS	4	S/F	0727.5	0728.6	1.9	350	50		III
	430	KRAK			0800.0E	1318.3		100			
	9500	POTS	20	GRF	0806.5	0807.0	12.0	6.5			
	204	IZMI	8	S	0811.0	0811.0	.8	900	450		
	3200	BERN	2	S/F	0840.1	0842.5	45.0	.0			ONLY PAPER REC
	5200	BERN	2	S/F	0840.2	0842.5	45.0	9.0			
	3100	CRIM	1	S	0842.0	0843.5	2.0	7	2		
	5200	BERN	1	S	0941.9	0943.9	9.0	12.0			
	3200	BERN	1	S	0942.0	0943.8	9.0	.0			ONLY PAPER REC
	3100	CRIM	3	S	0942.5	0944.0	7.0	32	10		
	930	BORD	46	C	0943.0	0944.1	2.0	15	4		
	2650	DWIN	1	S	0943.0	0944	2.0	25	15		
	1470	POTS	3	S	0943.0	0944.0	5.0	28			
	3000	POTS	3	S	0943.0	0944.0	1.8	25			
	9500	POTS	3	S	0943.5	0944.2	1.5	28			
	234	POTS	4	S/F	1000.2	1000.3	.7	2900	75		III
	113	POTS	4	S/F	1000.3	1000.5	.7	850	85		III
	33	UPIC	8	S	1000.4	1000.5	.3				
	260	ONDR	8	S	1000.5	1000.5	.5	202 D			
	29	UPIC	8	S	1000.6	1000.8	.3				
	33	UPIC	45	C	1124.7	1125	1.5				
	29	UPIC	45	C	1125.0	1125.1	.8				
	810	KRAK	1	S	1147.0	1147.3	.7	14	5		
	536	ONDR	8	S	1319.2	1319.2	.2	49			
	9400	HUAN		S	1911.3	1916.6	20.8	10.8	4.6		R
	2800	OTTA	20	GRF	2040.0	2117	100.0	13.4	6.6		
	1000	TYKW	5	S	2156.4	2156.6	.6	15	3		
	9400	TYKW	5	S	2242.8	2243.1	.8	88	20		
	3750	TYKW	5	S	2242.9	2243.1	.7	33	8		
	2695	PENT	1	S	2243.0	2243.2	1.0	2.8			
	2695	PENT	1	S	2308.5	2308.7	1.0	4.2	2.0		
15	234	POTS	44	NS	0540.0E	1437	556.0D	60			
	200	GORK	44	NS	0551.0E		369.0D		10		
	100	GORK	44	NS	0600.0E		360.0E		5		
	204	IZMI	44	NS	0600.0E		360.0D	65			
	127	TORN	44	NS	0650.0E	1027.8	490.0D	15			V1
	430	KRAK	44	NS	0745.0E	0942.5	300.0D	450	44		
	260	ONDR	44	NS	0820.0E		362.0D	152	28		
	536	ONDR	44	NS	0820.0E		362.0D	14			
	200	HIRA	44	NS	2043.0E	0700	670.0D	45	15		0
	9400	TYKW	5	S	0053.5	0054.0	1.5	9	4		
	3750	TYKW	5	S	0107.3	0107.8	1.5	7	3		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
15	3750	TYKW	5 S	0115.0	0117	10.0	3	1		
	3750	TYKW	28 PRE	0155.0	0438	194.0	15	6		
	2000	TYKW	28 PRE	0215.0	0438	174.0	9	4		
	3750	TYKW	45 C	0228.0	0230.8	4.0	18	5		
	5730	IRKU	2 S	0229.1	0230.6	4.0	69	22		L
	9400	TYKW	5 S	0230.0	0230.5	2.0	19	7		
	9400	TYKW	29 PBI	0232.0		20.0	3	1.5		
	3750	TYKW	29 PBI	0232.0		15.0	4	2		
	2000	TYKW	5 S	0303.0	0304.6	1.7D	8	1.5D		
	1000	TYKW	45 C	0304.0	0305.0	3.0	29	5		
	1000	TYKW	28 PRE	0304.0	0502	118.0	4	2		
	3750	TYKW	45 C	0305.0	0305.3	2.0	4	2		
	9400	TYKW	28 PRE	0309.0	0438	120.0	14	5		
	9100	GORK	22 GRF	0439.0E	0604.0	330.0D	48			
	1000	TYKW	45 C	0502.0	0520.9	45.0	100	37		
	2000	TYKW	45 C	0507.0	0507.2	1.0	4.5	1.5		
	35000	NAGO	20 GRF	0507.0	0552	123.0	20			
	3750	TYKW	45 C	0509.0	0530	60.0	45	38		
	2950	GORK	20 GRF	0509.0	0528.0	227.0	37			
	9400	TYKW	45 C	0509.0	0551	60.0	40	25		
	2000	TYKW	45 C	0509.0	0528.5	40.0	69	40		
	17000	NOBE	20 GRF	0510.4	0556.0	132.0	30			0
	950	GORK	45 C	0512.0U	0521.1	21.0U	55			
	650	GORK	22 GRF	0512.0	0521.5	438.0E	120			
	950	GORK		0512.0U	0527.7		40			
	950	GORK	29 PBI	0533.0	0533.7	112.0	17			
	1000	TYKW	29 PBI	0547.0		80.0D	12	9 D		
	2000	TYKW	29 PBI	0549.0		100.0D	30	22 D		
	3750	TYKW	29 PBI	0609.0		80.0D	38	25 D		
	9400	TYKW	30 PBI	0609.0		80.0D	35	30 D		
	9400	TYKW	45 C	0627.0	0652.4	40.0	20	6		
	3100	CRIM	26 FAL	0704.0	1112.0		26			
	5200	BERN	21 GRF	0755.1	0806.5	70.0	12.0			
	8400	BERN	21 GRF	0755.1	0806.7	70.0	15.0			
	3200	BERN	21 GRF	0755.1	0806.5	70.0	.0			ONLY PAPER REC
	11800	BERN	21 GRF	0755.1	0831.0	70.0	22.0			
	3100	CRIM	1 S	0805.0	0806.5	6.0	12	4		
	9500	POTS	3 S	0805.5	0806.9	4.0	14			
	3000	POTS	3 S	0805.5	0806.5	2.0	11			
	8400	BERN	20 GRF	1034.8	1037.1	12.0U	4.0			
	5200	BERN	20 GRF	1035.6	1037.1	39.0	5.0			
	930	BORD	46 C	1116.0	1116.9	1.1	15	2		
	3100	CRIM		1116.0	1117.0	3.0	7	2		
	1470	POTS	8 S	1116.4	1116.5	.6	13			
	33	UPIC	45 C	1141.5	1142	1.4				
	29	UPIC	45 C	1141.7	1142.4	1.4				
	930	BORD	8 S	1212.8	1212.8	.1	25	1		
	11800	BERN	41 F	1233.0	1247.1	70.0	56.0			
	8400	BERN	41 F	1233.0	1244.0	70.0	40.0			
	19600	BERN	41 F	1233.0	1247.0	70.0	56.0			
	5200	BERN	41 F	1233.0	1244.0	70.0	23.0			
	9400	HUAN	8 S	1235.2	1235.6	.7	32.0	15.2		R
	3200	BERN	41 F	1237.0	1244.0	80.0	.0			ONLY PAPER REC
	2800	OTTA	24OAR	1238.0	1249	11.0	10.0			
	9400	HUAN	C	1242.6	1244.0	6.1	55.6	30.1		L
	9400	HUAN		1242.6	1246.9		54.0			L
	9500	POTS	29 PBI	1243.0	1244.0	25.0	48			
	1470	POTS	29 PBI	1243.2	1244.0	12.0	22			
	3000	POTS	29 PBI	1243.4	1244.3	30.0	9.8			
	2800	OTTA	2 S/F	1243.5	1244.2	3.5	9.6	4.8		
	9400	HUAN	PBI	1248.7	1248.7	17.1	20.2	10.1		L
	9400	HUAN	S	1331.0	1343.4	26.0	6.7	2.1		0
	2800	OTTA	4 S/F	1549.0	1549.8	4.5	18.0	5.0		
	9400	HUAN	S	1551.8	1608.4	38.0	5.0	3.6		0
	2800	OTTA	30 PBI	1553.5	1553.5	45.0	7.4	5.2		
	2800	OTTA	1 S	1602.0	1603	2.0	5.6	2.0		
	9400	HUAN	S	1602.0	1603.0	1.3	3.4	3.0		0
	2800	OTTA	1 S	1733.5	1733.7	1.0	4.0	2.0		
	2800	OTTA	26O FAL	1900.0	2040	100.0	-6.0	-3.0		
	1000	TYKW	8 S	2219.5	2219.6	.2	43	15		
	1000	TYKW	45 C	2335.0	2335.6	1.0	31	6		
16	200	GORK	44 NS	0518.0E		450.0D		20		
	234	POTS	44 NS	0555.0E	0713	445.0D	100			
	127	TORN	44 NS	0600.0E	0711.5	540.0D	220	4		V1,DISTURBED
	204	IZMI	44 NS	0600.0E		360.0D	70			
	536	ONDR	44 NS	0756.0E		398.0D	91	11		
	260	ONDR	44 NS	0756.0E		398.0D	74	15		
	430	KRAK	44 NS	0800.0E	1226.5	360.0D	500	29		
	200	HIRA	44 NS	2047.0E	2214	290.0D	8	5		
	3750	TYKW	20 GRF	0110.0	0140	80.0	3	1.5		
	2000	TYKW	20 GRF	0133.0	0137	30.0	2	1		
	2000	TYKW	5 S	0330.0	0335	15.0	2	1		
	3750	TYKW	5 S	0330.0	0335	20.0	6	2		
	950	GORK	22 GRF	0640.3	0641.2	14.0	6			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} MEAN	INT	POLARIZATION OR REMARKS
16	2950	GORK	1	S	0640.9	0641.2	1.7	3.2	1.6		
	650	GORK	22	GRF	0640.9	0651.0	23.6	16			
	234	POTS	8	S	0700.9	0700.8	.2	625	200		
	113	POTS	8	S	0711.6	0711.7	.6	420	100		III
	113	POTS	42	SER	0840.7	0842.0	3.3	100	3		III
	930	BORD	41	F	1038.0	1038.5	.6	9	2		
	2800	OTTA	21	GRF	1300.0	1330	105.0	5.6	2.3		
	930	BORD	41	F	1313.1	1313.6	.5	25	2		
	3200	BERN	21	GRF	1317.0	1319.0	32.0	.0			ONLY PAPER REC
	5200	BERN	21	GRF	1317.0	1318.8	32.0	5.0			
	2800	OTTA	1	S	1318.0	1319	2.0	8.4	4.2		
	113	POTS	4	S/F	1319.7	1319.8	.3	150	25		III
	2800	OTTA	23	GRF	1810.0	2025	310.0	5.4	2.7		
	2695	PENT	8	S	2014.0	2014.4	.6	4.2	2.1		
	2695	PENT	1	S	2016.0	2016.7	2.0	5.0	2.0		
	2800	OTTA	8	S	2053.0	2053.2	.8	5.8	2.8		
	9400	TYKW	5	S	2245.0	2246.4	3.0	9	3		
	9400	TYKW	5	S	2347.0	2347.6	1.5	13	4		
17	200	GORK	44	NS	0447.0E		490.0D		5		
	100	GORK	44	NS	0448.0E		489.0E		5		
	260	ONDR	44	NS	0803.0E		401.0D	67	4		
	430	KRAK	43	NS	1252.0	1339.0	70.0D	90	11		
	2800	TYKW	45	C	0022.0	0024.6	5.0	4	1		
	1000	TYKW	45	C	0024.0	0024.3	1.5	3	1		
	2800	TYKW	20	GRF	0155.0	0208	40.0	2	1		
	3750	TYKW	20	GRF	0204.0	0208	30.0	4	2		
	9400	TYKW	5	S	0536.0	0538	5.0	3	1.5		
	1000	TYKW	5	S	0631.0	0631.5	1.0	4.5	1		
	9500	POTS	3	S	0811.5	0812.4	2.0	17			
	9100	GORK	3	S	0811.6	0812.2	3.3	35	17		
	10715	DWIN	1	S	0812.0	0812.5	1.0	8	5		
	113	POTS	4	S/F	0848.9	0849.2	.5	200	40		III
	33	UPIC	2	S/F	1003.1	1003.2	.4				
	29	UPIC	2	S/F	1003.3	1003.5	.3				
	127	TORN	4	S/F	1111.1	1111.6	1.3	240	30		
	430	KRAK	42	SER	1117.3	1200.2	72.0	64			
	113	POTS	42	SER	1156.6	1200.2	5.8	4000	55		III
	127	TORN	7	C	1159.7	1200.1	1.2	5200	2600		
	33	UPIC	4	S/F	1200.0	1200.1	1.1				
	29	UPIC	4	S/F	1200.0	1200.3	.9				
	536	ONDR	42	SER	1201.0	1440.6	140.0	43			
	2800	OTTA	20	GRF	1300.0	1415	175.0	6.6	3.3		
	11800	BERN	20	GRF	1333.0	1429.6	106.0	60.0			ONLY PAPER REC
	5200	BERN	20	GRF	1344.6	1429.0U	86.0	17.0			ONLY PAPER REC
	2800	OTTA	20	GRF	1605.0	1630	55.0	3.6	2.0		
	2800	OTTA	23	GRF	1725.0		155.0	4.0			
	2800	OTTA	1	S	1759.0	1759.3	2.0	5.0	2.5		
	1000	TYKW	45	C	2230.7	2231.3	3.0	29	3		
	1000	TYKW	45	C	2249.7	2250.7	4.0	8	1.5		
	1000	TYKW	5	S	2332.0	2332.4	.7	7	1.5		
	9400	TYKW	45	C	2335.7	2337.7	3.0	26	5		
	17000	NOBE	7	C	2335.9	2336.2	2.8	35			L
	1000	TYKW	5	S	2353.0	2353.3	.7	46	5		
	2000	TYKW	5	S	2353.0	2353.3	.7	1	.3		
18	127	TORN	44	NS	0800.0E		480.0D		1		V1,DISTURBED
	260	ONDR	44	NS	0833.0E		335.0D	40			
	9400	TYKW	5	S	0029.5	0029.8	4.0	11	2.5		
	9400	TYKW	45	C	0137.0	0144.1	12.0	23	2		
	17000	NOBE	7	C	0141.3	0143.9	3.4	23			L
	5730	IRKU	2	S	0237.0	0240.0	4.0	37	7		L
	9400	TYKW	45	C	0238.5	0240.0	2.0	36	4		
	3750	TYKW	45	C	0238.5	0240.1	2.5	8	3.5		
	2000	TYKW	45	C	0238.5	0240.1	6.0	17	3.5		
	1000	TYKW	5	S	0238.7	0240.2	6.0	7	2.5		
	17000	NOBE	21	GRF	0310.9	0337.7	85.0	10			0
	9400	TYKW	45	C	0319.0	0319.9	2.5	10	3		
	1000	TYKW	45	C	0319.0	0319.2	1.0	1.5	.3		
	9400	TYKW	5	S	0327.0	0327.5	2.0	24	7		
	17000	NOBE	7	C	0327.0	0327.6	7.0	60			L
	9400	TYKW	5	S	0330.4	0330.6	1.0	13	3		
	9400	TYKW	5	S	0333.0	0333.2	1.0	7	1.5		
	35000	NAGO	20	GRF	0356.0	0507	104.0	7			
	9500	POTS	20	GRF	0710.0	0745	127.0	10			
	9100	GORK	21	GRF	0724.8		113.0	10			
	11800	BERN	21	GRF	0832.6	0836.1	11.0	100.0			
	5200	BERN	21	GRF	0832.6	0836.1	21.0	23.0			
	8400	BERN	21	GRF	0832.6	0836.1	14.0	60.0			
	35000	BERN	21	GRF	0835.1	0850.7	8.0U	230.0			
	19600	BERN	21	GRF	0835.2	0836.1	6.0	192.0			
	5730	IRKU	2	S	0836.0	0836.8	1.0	40			R
	10715	DWIN	1	S	0836.0	0836.5	1.0	45	20		
	9100	GORK	45	C	0836.0	0836.2	3.9	85			
	9100	GORK			0836.0	0839.0		40			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
18	5730	IRKU	1 S	0838.8	0839.1	1.0	25			R
	10715	DWIN	1 S	0839.0	0839.5	1.0	25	15		
	234	POTS	8 S	0850.9	0851.1	.4	32000	10000		III
	260	ONDR	8 S	0851.1	0851.1	.3	226 D			
	5200	BERN	21 GRF	1017.3	1044.4	76.0	15.0			
	11800	BERN	21 GRF	1027.6	1044.4	35.0U	91.0			
	8400	BERN	21 GRF	1031.6	1044.5	35.0U	40.0			
	9100	GORK		1040.5	1044.4		25			
	9100	GORK	45 C	1040.5	1041.3	5.0	40			
	10715	DWIN	1 S	1041.0	1041.5	1.0	10	5		
	430	KRAK	8 S	1043.2	1043.2	.1	80			
	19600	BERN	21 GRF	1043.5	1044.3	35.0U	90.0			
	10715	DWIN	1 S	1044.0	1045.5	2.0	15	10		
	9100	GORK	29 PBI	1045.5	1045.5	10.0	9			
	1470	POTS	20 GRF	1145.0	1148.8	35.0	3.6			
	9500	POTS	20 GRF	1145.0	1212.5	78.0	8.5			
	3000	POTS	20 GRF	1150.0	1156.6	54.0	7.2			
	8400	BERN	20 GRF	1244.0	1503.0	160.0U	10.0			
	11800	BERN	20 GRF	1244.0	1434.2	160.0U	70.0			
	5200	BERN	20 GRF	1244.0	1319.9	160.0	21.0			
	2800	OTTA	21 GRF	1520.0	1550	80.0	3.6	2.3		
	2800	OTTA	1 S	1525.0	1525.5	1.0	1.8	.9		
	2800	OTTA	21 GRF	1830.0	1850	45.0	3.2	2.0		
	2800	OTTA	8 S	1834.5	1834.5	.3	50.0			
	2800	OTTA	8 S	1900.6	1900.6	.2	293.0			
	2800	OTTA	21 GRF	1920.0	2020	90.0	2.2	1.4		
	2800	OTTA	8 S	1947.2	1947.3	.5	285.0			
	2800	OTTA	21 GRF	2128.0	2133	12.0	5.0	2.5		
	200	HIRA	45 C	2128.7	2129.3	2.6	9000	960		
	2800	OTTA	3 S	2129.0	2129.5	2.0	28.4	7.6		
	1000	TYKW	5 S	2129.0	2129.6	2:0U	53 U	12 U		
	500	HIRA	46 C	2129.1	2129.4	17.0	45	8		
	100	HIRA	8 S	2129.3	2129.5	.5	930			WL
	2695	PENT	2A S/F	2146.0	2146.5	4.5	3.4	1.7		
	2695	PENT	8 S	2149.0	2149	.1	19.0			
	3750	TYKW	5 S	2247.0	2247.6	2.0	15	4		
	1000	TYKW	5 S	2247.0	2247.7	1.5	6	2.5		
	2000	TYKW	5 S	2247.0	2247.7	2.0	26	7		
	2695	PENT	3 S	2247.2	2247.9	1.0	24.6	12.0		
	3750	TYKW	29 PBI	2249.0		6.0	1.5	.7		
	1000	TYKW	5 S	2302.0	2302.5	1.0	3	1		
	1000	TYKW	5 S	2347.2	2347.6	1.0	3	1		
19	127	TORN	44 NS	0600.0E	1347.6	540.0D	60	3		V0,DISTURBED
	260	ONDR	44 NS	0816.0E		356.0D	28			
	17000	NOBE	7 C	0000.0	0000.8	3.0	60			L
	2930	VORO	3 S	0000.0	0003	5.0	23			
	9400	TYKW	45 C	0000.0	0000.9	3.0	65	17		
	2000	TYKW	45 C	0000.0	0000.2	4.0	9	1		
	2000	TYKW	8 S	0030.6	0030.7	.2	5	1.5		
	2000	TYKW	45 C	0032.9	0033.0	.5	47	12		
	2000	TYKW	5 S	0046.0	0046.8	3.0	16	3		
	1000	TYKW	5 S	0046.0	0046.8	2.0	6	1.5		
	3750	TYKW	5 S	0046.5	0046.8	4.5	8	3		
	200	HIRA	46 C	0046.6	0047.0	1.0	560	186		0
	100	HIRA	46 C	0046.6	0046.8	1.3	1800	245		WL
	2000	TYKW	8 S	0201.4	0201.5	.3	4	1		
	2000	TYKW	8 S	0204.7	0204.8	.3	7	2		
	200	HIRA	8 S	0211.5	0211.7	.3	270			0
	500	HIRA	8 S	0211.6	0211.6	.2	180			WR
	1000	TYKW	8 S	0211.6	0211.7	.2	7	2		
	9400	TYKW	21 GRF	0509.0	0512	70.0	8	3		
	9100	GORK	22 GRF	0509.7	0542.4	67.0	23	11		
	3750	TYKW	21 GRF	0510.0	0540	70.0	5	2		
	9400	TYKW	5 S	0537.0	0539.7	10.0	13	4		
	9400	TYKW	45 C	0551.0	0553.1	7.0	20	4		
	3750	TYKW	45 C	0608.5	0609.1	1.5	6	2		
	9400	TYKW	45 C	0608.5	0608.6	2.0	28	4		
	2000	TYKW	8 S	0608.6	0608.7	.2	21	5		
	17000	NOBE	8 S	0608.6	0608.7	.2	31			L
	9100	GORK	20 GRF	0641.4	0642.2	6.6	9	3.5		
	5200	BERN	21 GRF	0652.0	0732.9	83.0	15.0			
	1470	POTS	22 GRF	0702.0	0758.4	64.0	6.5			
	9500	POTS	22 GRF	0704.0	0754.8	145.0	15			
	9100	GORK	22 GRF	0704.5	0754.6	142.0	15			
	3000	POTS	20 GRF	0715.0	0803	48.0	9.2			
	234	POTS	8 S	0836.7	0836.7	.1	200	70		
	11800	BERN	21 GRF	0933.5	0938.7	63.0	28.0			
	8400	BERN	21 GRF	0933.5	0938.8	63.0	18.0			
	5200	BERN	21 GRF	0933.5	0955.9	63.0	12.0			
	9500	POTS	29 PBI	0937.5	0938.9	52.0	25			
	10715	DWIN	1 S	0938.0	0939	2.0	10	5		
	9100	GORK	1 S	0938.1	0939.0	1.7	27	14		
	9100	GORK	29 PBI	0939.8	0939.8	36.0	9.5	5		
	430	KRAK	8 S	1100.8	1100.8	.3	50			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
19	5200	BERN	21	GRF	1200.0	1241.0	91.0	14.0			
	33	UPIC	45	C	1223.7	1224.5	2.0				
	29	UPIC	45	C	1223.7	1224.6	2.9				
	11800	BERN	21	GRF	1232.7	1240.4	114.0	82.0			
	8400	BERN	21	GRF	1232.7	1241.0	114.0	35.0			
	10715	DWIN	2	S/F	1238.0	1238.5	4.0	15	8		
	2800	OTTA	20	GRF	1305.0	1335	125.0	4.6			
	430	KRAK	42	SER	1322.7	1324.5	3.0	56			
	9500	POTS	40	F	1323.0	1325	3.5	8.1			
	430	KRAK	8	S	1335.2	1335.3	.4	63			
	2800	OTTA	8	S	2127.7	2127.9	.5	16.0	8.0		
	1000	TYKW	5	S	2336.3	2336.6	.5	11	3		
	2000	TYKW	45	C	2350.0	2353.3	7.0	4	1		
20	127	TORN	44	NS	0600.0E	1128.1	548.0D	100	5		V1
	260	ONDR	44	NS	0800.0E		405.0D	28			
	2000	TYKW	32	ABS	0100.0	0145	55.0	-3	-1.5		
	9400	TYKW	32	ABS	0100.0	0150	110.0	-6	-2.5		
	3750	TYKW	32	ABS	0100.0	0140	65.0	-6	-3		
	9400	TYKW	5	S	0405.0	0406	3.0	3	1.5		
	9400	TYKW	5	S	0414.3	0414.5	2.0	4	1.5		
	9400	TYKW	8	S	0435.6	0435.7	.2	14	5		
	9400	TYKW	45	C	0445.0	0445.4	10.0	28	4		
	2000	TYKW	21	GRF	0500.0	0509	90.0	2	1		
	3750	TYKW	20	GRF	0525.0	0539	55.0	4	1.5		
	2000	TYKW	45	C	0528.0	0529.0	2.0	3	1		
	9400	TYKW	5	S	0609.5	0609.7	1.5	8	2.5		
	3100	CRIM	21	GRF	0630.0	0712.0	210.0	16	5		
	9400	TYKW	5	S	0631.0	0632.5	10.0	8	3		
	9100	GORK	20	GRF	0631.3	0632.7	9.2	10	5		
	9100	GORK	21	GRF	0821.0	0903.6	75.0	19			
	8400	BERN	3	S	0859.0	0903.0	18.0	40.0			
	5200	BERN	3	S	0859.0	0903.0	35.0	17.0			
	11800	BERN	3	S	0859.0	0903.0	18.0	28.0			
	3100	CRIM	1	S	0902.0	0902.5	1.0	5	2		
	9500	POTS	29	PBI	0902.0	0903.0	56.0	31			
	9100	GORK	3	S	0902.2	0903.0	1.4	33			
	3000	POTS	29	PBI	0902.8	0903.4	56.0	8.9			
	10715	DWIN	1	S	0903.0	0903.5	2.0	10	5		
	2950	GORK	20	GRF	0905.8	0906.2	21.4	5	2		
	113	POTS	4	S/F	0924.3	0924.3	.2	250	40		III
	127	TORN	47	GB	0937.5	0939.7	3.5	3800			
	9100	GORK	20	GRF	1028.8	1151.1	121.0	14			
	430	KRAK	8	S	1115.7	1115.8	.3	700 D			
	204	IZMI	4	S/F	1128.0	1128.2	.7	130	45		
	33	UPIC	45	C	1128.1	1128.5	1.5				
	29	UPIC	45	C	1128.3	1128.5	1.1				
	9400	HUAN		S	1134.3	1155.0	36.0	5.4	1.8		0
	9400	HUAN		S	1150.5	1150.8	2.0	16.0	8.0		0
	930	BORD	41	F	1323.0	1323.2	2.5	14	2		
	228	HARS	45	C	1413.7	1413.9	.5	140	30		
	2800	OTTA	20	GRF	1455.0	1522	110.0	13.6	5.0		
	930	BORD	41	F	1504.0	1506.7	8.0	19	2		
	2800	OTTA	20	GRF	1740.0	1750	25.0	3.2	1.6		
	2695	PENT	20	GRF	2150.0	2220	55.0	4.4	2.0		
	9400	TYKW	5	S	2305.0	2306.3	3.0	30	4		
	3750	TYKW	21	GRF	2320.0	2350	140.0	3	1.5		
	1000	TYKW	45	C	2327.0	2327.3	1.0	3	1		
	1000	TYKW	5	S	2333.0	2333.2	1.0	8	2		
	2000	TYKW	5	S	2346.0	2346.9	2.0	5	1.5		
	1000	TYKW	5	S	2346.0	2347.0	2.0	3	1		
	200	HIRA	42	SER	2347.0	2349.6	5.6	1000			
21	2000	TYKW	5	S	0002.0	0003.6	3.0	27	2		
	1000	TYKW	45	C	0003.0E	0003.3	2.0D	7	1.5D		
	3750	TYKW	5	S	0003.0E	0003 U	1.0D	2	1 D		
	2000	TYKW	20	GRF	0030.0	0045	60.0	4	2		
	3750	TYKW	20	GRF	0034.0	0045	40.0	3	1.5		
	9400	TYKW	21	GRF	0035.0	0045	35.0	6	3		
	9400	TYKW	5	S	0043.0	0043.6	2.0	46	10		
	9400	TYKW	5	S	0146.0	0147	3.0	5	2		
	2000	TYKW	5	S	0431.0	0431.4	2.0	2.5	1		
	1000	TYKW	5	S	0431.0	0431.4	1.5	1	.3		
	9100	GORK	1	S	0536.8	0537.7	2.9	9	4		
	9400	TYKW	5	S	0537.0	0537.8	3.0	5	2		
	9400	TYKW	5	S	0559.5	0559.8	.5	16	5		
	204	IZMI	7	C	0629.5	0630.5	1.5	450	250		
	204	IZMI	41	F	0634.0	0634.0	2.5	200			
	127	TORN	45	C	0842.6	0843.8	2.5	80	20		
	33	UPIC	42	SER	0903.5	0917.3	14.2				
	29	UPIC	42	SER	0904.0	0917.8	14.0				
	127	TORN	42	SER	0908.2	0917.6	10.5	100			
	113	POTS	42	SER	0915.0	0917.5	5.8	150	2		III
	8400	BERN	21	GRF	0953.7	0955.3	60.0	12.0			
	5200	BERN	21	GRF	0953.7	1029.8	60.0	8.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
21	9100	GORK	21	GRF	0954.4	1001.1	15.0	6	3		
	9100	GORK	1	S	0954.9	0955.2	.6	10	5		
	9500	POTS	40	F	0955.0	1001	50.0	9.7			
	536	ONDR	2	S/F	1116.3	1116.7	1.5	21			
	430	KRAK			1116.5	1117.7		39			
	430	KRAK	42	SER	1116.5	1116.5	1.5	170			
	260	ONDR	42	SER	1138.0	1403	166.0	34			
	113	POTS	42	SER	1236.8	1241.9	14.0	1400	40		III
	234	POTS	4	S/F	1246.1	1246.4	.5	300	30		III
	29	UPIC	8	S	1246.5	1246.7	.7				
	33	UPIC	8	S	1246.5	1246.5	.5				
	113	POTS	42	SER	1405.3	1407.6	5.4	1600	25		III
	234	POTS	42	SER	1407.4	1410.6	3.3	2400	6		III
	113	POTS	8	S	1431.1	1431.2	.6	2100	700		III
	2800	OTTA	240	R	1445.0	1535	50.0	6.8			
22	260	ONDR	44	NS	0800.0E		402.0D	54	2		
	9400	TYKW	20	GRF	0015.0	0020	75.0	6	3		
	2000	TYKW	20	GRF	0015.0	0025	75.0	2	1		
	3750	TYKW	20	GRF	0015.0	0020	75.0	4	2		
	2000	TYKW	20	GRF	0200.0	0230	160.0	4	2		
	9400	TYKW	20	GRF	0205.0	0212	55.0	5	2		
	3750	TYKW	20	GRF	0207.0	0212	40.0	5	2		
	1000	TYKW	42	SER	0319.9	0326.2	8.0	25	1.5		
	9400	TYKW	5	S	0510.0	0514.2	20.0	6	2		
	3750	TYKW	5	S	0510.0	0514.2	20.0	6	1.5		
	2000	TYKW	5	S	0553.5	0554.0	1.0	4	1		
	204	IZMI	41	F	0756.5	0800.5	4.5	153			
	234	POTS	8	S	0800.6	0800.6	.1	150	50		III
	113	POTS	4	S/F	0948.0	0948.3	.5	200	20		III
	113	POTS	4	S/F	1010.5	1010.9	1.0	125	25		III
	9500	POTS	1	S	1252.0	1252.0	1.0	6.8			
	3000	POTS	4	S/F	1333.5	1333.8	1.5	13			
	1470	POTS	2	S/F	1333.5	1334.4	1.5	2.2			
	2800	OTTA	2	S/F	1333.7	1334	2.0	9.6			
	2650	DWIN	2	S/F	1334.0	1334.5	1.0	30	15		
	113	POTS	4	S/F	1417.2	1420.4	5.3	175	10		III
	930	BORD	41	F	1419.2	1419.3	.2	30	2		
	2800	OTTA	40	F	1420.0	1421.2	2.0	9.6			
	234	POTS	41	F	1420.2	1421.2	1.1	120	4		III
	1470	POTS	2	S/F	1421.0	1421.2	1.5	3.6			
	3000	POTS	4	S/F	1421.0	1421.3	1.5	14			
	2800	OTTA	21	GRF	1435.0	1635	165.0	6.2	3.1		
	234	POTS	42	SER	1448.0	1448.1	7.7	2400	15		III
	2800	OTTA	8	S	1508.5	1508.5	.5	3.8			
	2800	OTTA	2	S/F	1528.0	1532	8.0	7.2	3.0		
	228	HARS	45	C	1528.3	1530.0	7.5	665	225		
	930	BORD	46	C	1528.6	1533.1	7.0	165	6		
	5200	BERN	21	GRF	1529.8	1532.1	8.0	21.0			
	11800	BERN	21	GRF	1529.8	1532.3	3.0	22.0			
	8400	BERN	21	GRF	1529.8	1532.1	6.0	22.0			
	3200	BERN	21	GRF	1529.8	1532.0	8.0	.0			ONLY PAPER REC
	9400	HUAN		S	1530.3	1532.2	4.5	32.6	9.2		L
	930	BORD	41	F	1620.0	1621.1	3.0	22	2		
	2695	PENT	1	S	2237.0	2237.8	2.0	8.0	2.7		
	1000	TYKW	5	S	2237.0	2237.6	1.5	4	1		
	3750	TYKW	5	S	2237.0	2237.8	3.0	6	2		
	2000	TYKW	5	S	2237.0	2237.7	4.0	12	4		
	9400	TYKW	5	S	2249.6	2250.1	1.5	20	5		
	3750	TYKW	28	PRE	2330.0	2338	28.0	8	3		
	2000	TYKW	28	PRE	2332.0	2338	26.0	3	2		
	100	HIRA	41	F	2355.0	0015.3	25.0	800			0
	200	HIRA	46	C	2355.3	0003	128.0	150	11		0
	200	HIRA			2355.3	0008.6		70			0
	200	HIRA			2355.3	0017.3		90			MR
	3750	TYKW	45	C	2358.0	0006.9	32.0	175	50 D		
	1000	TYKW	45	C	2358.0	0016.2	62.0	200	25 D		
	9400	TYKW	45	C	2358.0	0007 U	22.0	90 D	35 D		
	2000	TYKW	45	C	2358.0	0016.2	32.0	138	45 D		
	500	HIRA	48	C	2358.6	0022.1	28.0	135	40		SR
23	260	ONDR	44	NS	0835.0E		353.0D	94	6		
	17000	NOBE	20	GRF	0001.2	0007.4	67.0	38			0
	9400	TYKW	29	PBI	0020.0		120.0	25	7		
	3750	TYKW	29	PBI	0030.0		110.0	16	5		
	2000	TYKW	30	PBI	0030.0		110.0	8	3		
	2000	TYKW	45	C	0035.0	0040.0	10.0	9	1.5		
	2000	TYKW	45	C	0049.2	0051.2	2.4	14	2		
	500	HIRA	46	C	0050.4	0050.6	1.0	45	20		SR
	1000	TYKW	29	PBI	0100.0		30.0	4	2		
	1000	TYKW	45	C	0134.0	0138.9	6.0	122	6		
	2000	TYKW	45	C	0134.3	0136.6	6.0	9	3		
	1000	TYKW	45	C	0145.0	0146.0	3.0	11	1		
	1000	TYKW	45	C	0256.3	0256.9	1.0	3.5	1		
	1000	TYKW	42	SER	0328.0	0334.3	17.0	33	1		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
23	2800	TYKW	45	C	0331.5	0334.3	8.0	21	2		
	1000	TYKW	8	S	0421.5	0421.6	.2	8	2		
	200	HIRA	46	C	0430.7	0442.2	25.2	100	14		MR
	2000	TYKW	45	C	0431.0	0439.5	15.0	98	7		
	1000	TYKW	45	C	0432.0	0439.5	13.0	17	3		
	500	HIRA	41	F	0432.0	0442.0	13.0	105			SR
	100	HIRA	48	C	0434.0	0439.7	10.3	15000	1800		0
	3750	TYKW	45	C	0435.0	0442.6	12.0	20	5		
	9400	TYKW	45	C	0437.5	0442.6	8.5	21	5		
	5730	IRKU	20	GRF	0441.5	0442.5	4.0	55	21		R
	1000	TYKW	45	C	0613.7	0614.1	.6	4	1		
	113	POTS	46	C	0716.2	0738.5	54.0	7000	10		
	1000	TYKW	45	C	0718.7	0719.1	1.0	14	2		
	930	BORD	41	F	0718.8	0719.2	.6	33	2		
	2000	TYKW	45	C	0719.2	0719.3	1.0	3	1		
	2000	TYKW	8	S	0722.6	0722.7	.2	6	2		
	1000	TYKW	8	S	0722.7	0722.8	.4	3	.6		
	1470	POTS	45	C	0726.0	0738	32.0	175			
	1000	TYKW	47	GB	0730.0	0738.1	11.0	700	90		
	2000	TYKW	47	GB	0730.0	0738.2	10.0D	700	70	D	
	2650	DWIN	45	C	0730.0	0739	25.0	480	100		
	930	BORD	45	C	0730.0	0738	24.0	922	17		
	650	GORK			0730.2	0748.2		250			
	650	GORK	47	GB	0730.2	0738.4	22.3	3350			
	200	GORK			0731.1	0739.3		300			
	950	GORK			0731.1	0738.0		520			
	950	GORK	46	C	0731.1	0737.0	11.3	220			
	200	GORK	46	C	0731.1	0736.0	21.8	80			
	127	TORN	47	GB	0731.6	0738.2	9.5	9500			
	100	GORK	46	C	0731.7	0735.8	28.2	3500			
	100	GORK			0731.7	0738.5		180000			
	2950	GORK	21	GRF	0731.8	0752.4	29.0	8			
	9100	GORK	21	GRF	0732.0		26.1	7			
	3100	CRIM	1	S	0732.0	0732.5	1.0	9	3		
	11800	BERN	46	C	0732.2	0738.6	45.0	354.0			
	19600	BERN	46	C	0732.2	0738.6	45.0U	368.0			
	8400	BERN	46	C	0734.0	0738.6	45.0	264.0			
	3200	BERN	46	C	0734.1	0737.7	56.0	.0			ONLY PAPER REC
	100	HIRA	48	C	0734.5	0738.5U	7.0	100000	D 7800	D	SUNSET
	5200	BERN	46	C	0735.0	0738.1	56.0	154.0			
	10715	DWIN	45	C	0735.0	0739	15.0	130	50		
	5730	IRKU	45	C	0735.0	0736.3	7.0	55			R
	5730	IRKU			0735.0	0738.2		304	D		R
	5730	IRKU			0735.0	0739.0		449			R
	5730	IRKU			0735.0	0739.9		232			R
	3100	CRIM			0735.0	0749.0		52			
	3100	CRIM	47	GB	0735.0	0739.5	20.0	200	70		
	9400	TYKW	45	C	0735.0	0738.5	6.0	360	110		
	9500	POTS	45	C	0735.0	0738.8	40.0	400			
	3000	POTS	45	C	0735.0	0739.0	64.0	190			
	3750	TYKW	45	C	0735.0	0738.0	6.0	130	50		
	228	HARS	45	C	0735.1	0736.7	14.9	230	50		
	33	UPIC	48	C	0735.1	0738.4	15.3				
	204	ISMI	47	GB	0735.2	0738.5	17.8	875	100		
	29	UPIC	48	C	0735.2	0738.5	14.3				
	2950	GORK	46	C	0735.2	0735.6	5.2	86			
	200	HIRA	46	C	0735.3	0737.2	4.7U	1300	U 95	U	WR,SUNSET
	9100	GORK	46	C	0735.5	0738.7	15.4	300			
	9100	GORK			0735.5	0748.0		70			
	2950	GORK			0736.5	0738.8		214			
	2950	GORK			0736.5	0736.5		160			
	234	POTS	46	C	0737.2	0738.3	14.0	240	3		
	17000	MOBE	45	C	0737.8	0738.5	1.0D	249	U		L,SUNSET
	127	TORH	27	RF	0744.0		10.5		1		
	5730	IRKU	2	S	0746.0	0748.1	6.0	145	46		R
	2950	GORK	3	S	0746.6	0748.1	4.3	36	18		
	3100	CRIM	29	PBI	0755.0	0755.0		7			
	930	BORD	41	F	0803.7	0804.1	.4	12	2		
	430	KRAK	8	S	0851.5	0851.5	.5	110			
	113	POTS	42	SER	0929.0	0930.1	2.6	350	2		III
	9100	GORK	3	S	0933.3	0934.4	3.5	280			
	9100	GORK	29	PBI	0936.8	1036.8	9.4	24			
	5200	BERN	3	S	0954.5	1034.0	51.0	177.0			
	8400	BERN	3	S	1013.0	1034.0	42.0	230.0			
	810	KRAK	8	S	1019.0	1019.0	.2	17			
	3200	BERN	3	S	1031.6	1033.8	20.0	.0			ONLY PAPER REC
	29	UPIC	48	C	1032.3	1033.8	11.8				
	3100	CRIM	47	GB	1032.5	1035.5	18.0	125	40		
	3100	CRIM			1032.5	1042.5		22			
	33	UPIC	48	C	1032.7	1034	11.6				
	2950	GORK	8	S	1032.8	1034.4	15.1	69	12		
	2950	GORK			1032.8	1043.6		23			
	10715	DWIN	3	S	1033.0	1034	5.0	90	50		
	35000	BERN	3	S	1033.0	1036.8	10.0	318.0			
	19600	BERN	3	S	1033.0	1034.7	11.0	167.0			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
23	11800	BERN	3	S	1033.0	1034.0	12.0	171.0			
	1470	POTS	4	S/F	1041.5	1043.5	12.0	21			
	3000	POTS	4	S/F	1042.0	1043.5	4.5	26			
	536	ONDR	45	C	1042.0	1043.7	12.0	104	23		
	930	BORD	46	C	1042.0	1043.7	3.0	81	7		
	2650	DWIN	2	S/F	1042.0	1044	4.0	30	20		
	808	ONDR	45	C	1042.0	1044.3	3.5	39	16		
	430	KRAK			1042.5	1048.5		170			
	430	KRAK	47	GB	1042.5	1043.5U	9.0	700 D	140		
	810	KRAK	4	S/F	1042.7	1043.5	2.0	75	24		
	650	GORK	4	S/F	1042.7	1044.2	2.3	250	125		
	430	KRAK	29	PBI	1051.5		32.0	10	8		
	930	BORD	41	F	1112.5	1112.7	.4	69	6		
	430	KRAK	48	C	1126.7	1144.0	25.0	130	20		
	430	KRAK	27	RF	1200.7	1205.0	10.5	9	5		
	3100	CRIM			1208.0	1227.0		16			
	3100	CRIM			1208.0	1222.5		24	8		
	3100	CRIM	41	F	1208.0	1220.5	12.0D	15			
	2650	DWIN	2	S/F	1216.0	1222	14.0	30	20		
	430	KRAK			1216.0	1226.5		600			
	430	KRAK	49	GB	1216.0	1219.5	15.0	400	25		
	9500	POTS	20	GRF	1216.0	1221.5	16.0	16			
	1470	POTS	23	GRF	1216.0	1226	31.0	40			
	2950	GORK			1217.0	1221.6		24			
	2950	GORK	46	C	1217.0	1219.7	12.1	17			
	3000	POTS	23	GRF	1217.0	1221.6	25.0	36			
	2950	GORK			1217.0	1226.3		16			
	536	ONDR	46	C	1217.0	1226.6	13.5	136	10		
	9400	HUAN		S	1218.1	1222.0	10.9	18.8	8.4		L
	5200	BERN	22	GRF	1218.6	1221.6	18.0	23.0			
	11800	BERN	22	GRF	1218.6	1226.3	18.0	18.0			
	8400	BERN	22	GRF	1218.6	1221.6	18.0	16.0			
	3200	BERN	22	GRF	1218.8	1221.5	18.0	.0			ONLY PAPER REC
	930	BORD	41	F	1219.0	1226.4	9.0	192	7		
	810	KRAK	40	F	1219.2		3.5	12	5		
	113	POTS	42	SER	1219.3	1226.3	11.0	770	12		III
	9100	GORK	45	C	1219.3	1222.1	10.8	16			
	9100	GORK			1219.3	1227.0		15			
	650	GORK			1220.0	1226.1		70 D			
	650	GORK	46	C	1220.0	1221.0	9.2	40			
	650	GORK			1220.0	1228.9		70 D			
	2800	OTTA	4	S/F	1220.0	1221.5	2.5	17.0	8.9		
	950	GORK	1	S	1220.9	1221.8	4.1	7			
	2800	OTTA	4	S/F	1225.0	1226	4.0	17.0	5.8		
	127	TORN	47	GB	1225.2	1226.4	2.5	1600	180		
	808	ONDR	4	S/F	1225.5	1226.2	3.0	84	11		
	234	POTS	41	F	1225.6	1226.8	1.4	360	8		III
	950	GORK	4	S/F	1225.7	1226.1	2.3	50			
	228	HARS	45	C	1225.9	1226.6	1.4	245	100		
	810	KRAK	4	S/F	1226.0	1226.6	3.0	300	16		
	2800	OTTA	20	GRF	1435.0	1500	55.0	3.8	2.0		
	930	BORD	46	C	1459.3	1500.9	5.7	58	8		
	930	BORD	41	F	1549.0	1551.4	14.0	60	7		
	2800	OTTA	3	S	1550.0	1553.5	7.0	69.0	23.0		
	3200	BERN	3	S	1550.0	1553.5	8.0	.0			ONLY PAPER REC
	5200	BERN	3	S	1551.0	1553.5	6.0	65.0			
	8400	BERN	3	S	1551.0	1553.4	6.0	41.0			
	11800	BERN	3	S	1551.0	1553.6	5.0	23.0			
	9400	HUAN		S	1551.6	1553.6	6.0	44.3	18.8		L
	2800	OTTA	29	PBI	1557.0	1557	13.0	3.2	1.6		
	9400	HUAN		PBI	1557.6	1557.6	11.2	4.8	2.7		L
	2800	OTTA	1	S	1801.3	1802	2.5	4.0	2.0		
	9400	HUAN		S	2035.0	2035.2	1.4	45.9	18.4		L
	2800	OTTA	8	S	2035.0	2035.2	.7	3.6	1.8		
	1000	TYKW	45	C	2201.2	2201.4	.3	13	4		
	1000	TYKW	8	S	2203.2	2203.3	.2	10	3		
	1000	TYKW	45	C	2228.7	2229.5	1.0	10	3		
	2000	TYKW	45	C	2229.0	2229.4	1.0	6	1.5		
24	260	ONDR	44	NS	0807.0E		383.0D	30			
	200	GORK	43	NS	1003.0		138.0E		5		
	127	TORN	43	NS	1126.0	1307.0	186.0	4600	30		V2
	113	POTS	43	NS	1143.0	1243	207.0D	200			
	234	POTS	43	NS	1146.0	1335	204.0D	35			
	2000	TYKW	45	C	0028.5	0031.4	5.0	73	12		
	1000	TYKW	45	C	0028.5	0030.5	5.0	255	25		
	3750	TYKW	5	S	0029.0	0031.3	6.0	13	3		
	9400	TYKW	5	S	0029.0	0031.6	4.0	5	2		
	100	HIRA	41	F	0029.1	0031.6	3.2	2000			8
	500	HIRA	46	C	0029.6	0030.0	2.0	45	10		SR
	2930	VORO	3	S	0030.0	0032	5.0	122			
	9400	TYKW	5	S	0309.0	0310.0	2.0	10	2		
	9400	TYKW	5	S	0542.3	0542.7	1.0	7	2		
	1000	TYKW	42	SER	0620.5	0622.0	3.5	28	1.5		
	1000	TYKW	5	S	0640.2	0640.4	.5	11	2		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
24	1000	TYKW	5	S	0642.0	0642.6	1.0	3	1		
	1000	TYKW	45	C	0649.7	0651.7	3.0	9	2		
	2000	TYKW	45	C	0651.0	0651.7	2.0	7	1.5		
	950	GORK	1	S	0651.0	0651.6	2.3	6			
	650	GORK	1	S	0651.0	0651.5	11.0	3	1.5		
	2950	GORK	1	S	0651.2	0651.6	1.0	5.0	2.5		
	650	GORK	4	S/F	1002.3	1003.0	1.2	70	35		
	950	GORK	2	S/F	1002.5	1003.0	1.1	28	14		
	2950	GORK	1	S	1002.9	1003.3	1.6	2.0	1.0		
	930	BORD	8	S	1021.5	1021.5	.1	27	1		
	2800	OTTA	3	S	1336.0	1337	9.0	10.6	3.6		
	1470	POTS	3	S	1336.0	1337.5	5.0	12			
	3000	POTS	3	S	1336.4	1337.2	3.1	12			
	2800	OTTA	20	GRF	1649.0	1655	15.0	2.2	1.1		
	2800	OTTA	22	GRF	1720.0	1950	210.0	6.8	3.2		
	2695	PENT	20	GRF	2055.0	2120	45.0	2.2	1.1		
	2000	TYKW	21	GRF	2215.0	2240	90.0	4	2		
	3750	TYKW	21	GRF	2215.0	2240	90.0	8	4		
	2695	PENT	1	S	2219.0	2224	8.0	8.0	2.8		
	3750	TYKW	5	S	2220.0	2223.5	7.0	5	2		
	2000	TYKW	5	S	2220.0	2223.5	6.0	3	1.5		
	9400	TYKW	20	GRF	2220.0	2240	70.0	10	5 U		RAIN
	1000	TYKW	45	C	2224.0	2224.7	1.0	36	4		
	1000	TYKW	45	C	2228.5	2229.8	3.0	22	6		
25	100	GORK	43	NS	0454.0		230.0		5		
	200	GORK	43	NS	0533.0		172.0		5		
	127	TORN	44	NS	0600.0E	0914.3	366.0D	15	1		V1
	260	ONDR	44	NS	0815.0E		375.0D	15			
	1000	TYKW	8	S	0225.3	0225.5	.4	16	4		
	2000	TYKW	5	S	0318.0	0318.6	3.0	7	1.5		
	1000	TYKW	5	S	0318.0	0318.5	1.0	1.5	.5		
	3750	TYKW	21	GRF	0355.0	0412	70.0D	6	3.5D		
	2000	TYKW	21	GRF	0355.0	0411	70.0D	5	3 D		
	9400	TYKW	20	GRF	0400.0	0410	65.0D	8	5 D		
	2000	TYKW	45	C	0431.0	0432.4	5.0	3	1		
	3750	TYKW	5	S	0431.0	0431.9	2.0	2.5	1		
	1000	TYKW	45	C	0431.0	0431.7	4.0	7	1.5		
	2950	GORK	1	S	0536.0	0539.9	4.9	7.6	4		
	9100	GORK	21	GRF	0536.0	0542.0	37.5	13			
	9100	GORK	4	S/F	0537.9	0539.8	3.0	57			
	100	GORK	8	S	0539.2	0540.2	1.3	1750			
	35000	NAGO	20	GRF	0542.0	0552	25.0	4			
	9100	GORK	3	S	0551.7	0552.0	.4	150			
	2950	GORK	1	S	0559.7	0600.4	3.2	3.5	2		
	127	TORN	47	GB	0628.9	0629.4	.7	730	370		
	9100	GORK	1	S	0723.8	0724.2	1.0	5	2.5		
	5200	BERN	22	GRF	0750.0	0820.6	36.0	21.0			
	8400	BERN	22	GRF	0750.0	0820.6	36.0	24.0			
	3200	BERN	22	GRF	0750.0	0820.5	36.0	.0			ONLY PAPER REC
	11800	BERN	22	GRF	0750.0	0820.6	36.0	31.0			
	9500	POTS	40	F	0751.0	0820.6	38.0	34			
	3000	POTS	40	F	0753.0	0803.1	30.0	37			
	1470	POTS	4	S/F	0753.0	0803.5	31.0	110			
	930	BORD	46	C	0753.0	0801.2	17.0	221	25		
	650	GORK	23	GRF	0753.0		29.6	12			
	950	GORK	21	GRF	0753.5	0757.5	29.5	7			
	2950	GORK	21	GRF	0754.0	0800.5	17.5	10			
	2650	DWIN	2	S/F	0756.0	0803	15.0	40	15		
	3100	CRIM	3	S	0756.0	0803.0	15.0	30 U	10		
	9100	GORK	21	GRF	0758.7	0806.2	59.0	12			
	950	GORK			0759.0	0803.2		130			
	950	GORK			0759.0	0802.4		110			
	950	GORK	46	C	0759.0	0801.3	8.8	106			
	650	GORK	46	C	0800.0	0802.3	8.4	130			
	650	GORK			0800.0	0803.1		150			
	2950	GORK	3	S	0800.5	0803.0	5.3	19	9		
	9100	GORK	1	S	0802.7	0803.0	1.7	8			
	9100	GORK	1	S	0808.2	0808.8	2.0	11			
	3100	CRIM	1	S	0817.5	0820.0	6.0	7	2		
	2950	GORK	1	S	0818.7	0820.6	4.3	4	2		
	9100	GORK	1	S	0818.9	0820.5	4.4	28	14		
	930	BORD	41	F	0819.0	0822.4	5.0	16	3		
	3100	CRIM	40	F	0825.0	0827.0	4.0	7	2		
	3100	CRIM	1	S	0840.5	0841.0	2.0	13	4		
	3200	BERN	46	C	0932.0	0948.0	57.0	.0			ONLY PAPER REC
	5200	BERN	46	C	0932.0	0947.9	57.0	266.0			
	536	ONDR	46	C	0936.0	0944.5	21.0	422 D	73		
	9100	GORK	21	GRF	0936.0	0959.0	70.0	22			
	3000	POTS	45	C	0937.0	0947.7	22.0	213			
	888	ONDR	46	C	0937.3	0945.2	22.0	313	58		
	8400	BERN	46	C	0938.0	0948.2	45.0	488.0			
	9500	POTS			0938.0	0948.2		840			
	930	BORD	45	C	0938.0	0942	20.0	350	85		
	1470	POTS	45	C	0938.0	0947.0	49.0	167			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
25	2650	DWIN	45 C	0938.0	0947	19.0	290	100		
	9500	POTS	45 C	0938.0	0947.9	61.0	840			
	950	GORK		0938.0	0946.0		206			
	950	GORK	46 C	0938.0	0942.0	14.9	200			
	650	GORK		0938.0	0945.7		2300			
	650	GORK	46 C	0938.0	0945.2	22.4	3100			
	100	GORK		0939.0	0959.1		3000			
	2950	GORK	45 C	0939.0	0942.2	18.3	33			
	100	GORK	41 F	0939.0	0939.2	20.0	270			
	2950	GORK		0939.0	0947.8		250			
	100	GORK		0939.0	0950.4		3000 D			
	100	GORK		0939.0	0943.7		270			
	10#	GORK		0939.0	0947.3		3100 D			
	810	KRAK		0939.2	0945.5		600			
	810	KRAK	49 GB	0939.2	0942.5	14.0	150	70		
	113	POTS	45 C	0940.0	0948.5	20.0	2000	15		III
	10715	DWIN	47 GB	0940.0	0948	20.0	330 D			
	9100	GORK	2 S/F	0940.6	0942.1	2.7	30			
	35000	BERN	47 GB	0942.0	0947.8	15.0	3446.0			
	19600	BERN	47 GB	0943.5	0947.8	39.0	1714.0			
	430	KRAK	49 GB	0944.5	0946.3	10.5	330	60		
	430	KRAK		0944.5	0950.0		1000 D			
	11800	BERN	47 GB	0946.0	0948.2	45.0	750.0			
	9100	GORK		0946.1	0947.9		840			
	9100	GORK	45 C	0946.1	0947.4	7.0	600			
	9100	GORK		0946.1	0948.6		900			
	9100	GORK		0946.1	0950.4		860			
	33	UPIC	46 C	0946.7	0947	4.2				
	260	ONDR	46 C	0946.7	0948.8	9.0	98	24		
	127	TORN	42 SER	0946.9	0948.5	14.5	4100			
	200	GORK		0946.9	0953.0		750			
	200	GORK	46 C	0946.9	0950.4	8.2	750 D			
	228	HARS	45 C	0947.0	0949.7	4.4	305	95		
	29	UPIC	46 C	0947.2	0947.4	4.4				
	234	POTS	45 C	0947.2	0947.5	11.0	100	12		III
	204	IZMI	47 GB	0947.2	0950.0	6.0	1000	600		
	1470	POTS	22 GRF	1102.0	1119.0	36.0	6.6			
	1470	POTS	40 F	1201.0	1205.5	6.0	2.9			
	2800	OTTA	20 GRF	1629.0	1633	25.0	3.8	1.3		
	9400	HUAN	S	1820.5	1842.0	40.0	13.6	5.0		L
	2800	OTTA	20 GRF	1830.0	1839	50.0	9.6	4.6		
	2000	TYKW	5 S	2212.0	2213.7	4.0	5	1.5		
	3750	TYKW	5 S	2212.0	2213.7	4.0	22	7		
	3750	TYKW	29 PBI	2216.0		14.0	5	2		
	2000	TYKW	8 S	2331.7	2331.8	.3	5	1.5		
26	260	ONDR	44 NS	0010.0E		389.0D	91			
	2000	TYKW	45 C	0000.5	0002.4	4.5	2.5	1 D		
	9400	TYKW	5 S	0000.5	0002.7	3.5D	16	5 D		
	3750	TYKW	5 S	0003.0E	0003 U	4.0D	12 D	4 D		
	9400	TYKW	29 PBI	0007.0E		13.0D	3	1.5D		
	3750	TYKW	29 PBI	0007.0		13.0	2	1		
	3750	TYKW	20 GRF	0026.0	0031	34.0	2	1		
	2000	TYKW	5 S	0030.0	0034	10.0	2	1		
	9400	TYKW	5 S	0101.0	0102	3.0	4	1.5		
	2000	TYKW	8 S	0433.7	0433.8	.3	2.5	.8		
	1000	TYKW	8 S	0433.7	0433.8	.3	10	2		
	204	IZMI	41 F	0604.5	0605.5	1.5	154			
	228	HARS	45 C	0920.4	0920.6	.8	95	45		
	29	UPIC	45 C	0920.6	0921.6	2.1				
	127	TORN	5 S	0920.7	0921.0	.7	330	160		
	33	UPIC	45 C	0920.7	0921.5	1.7				
	204	IZMI	7 C	0920.7	0920.8	1.5	190	140		
	234	POTS	4 S/F	0920.7	0920.9	.5	140	25		III
	113	POTS	4 S/F	0920.8	0920.9	1.2	550	80		III
	127	TORN	42 SER	0930.5	0930.9	6.5	270			
	234	POTS	4 S/F	1023.7	1023.8	.2	100	20		
	3000	POTS	2 S/F	1118.0	1118.4	3.0	4.9			
	1470	POTS	2 S/F	1118.0	1119.7	3.0	3.5			
	9500	POTS	2 S/F	1118.0	1119.4	3.5	9.6			
	9400	HUAN	S	1118.8	1119.5	3.1	13.1	4.4		8
	430	KRAK		1119.0	1120.7		900 D			
	430	KRAK	47 GB	1119.0	1119.5	2.0	900 D	14		
	536	ONDR	8 S	1119.7	1119.7	.2	42			
	2800	OTTA	27A RF	1315.0		240.0	3.6	3.2		
	2800	OTTA	24 R	1315.0	1355	40.0	3.6	2.0		
	2800	OTTA	24P R	1355.0		190.0	3.6			
	9400	HUAN	S	1356.8	1437.0	61.0	8.2	3.6		8
	9500	POTS	3 S	1404.0	1404.9	4.0	12			
	9400	HUAN	S	1404.0	1404.9	2.8	14.8	6.9		8
	930	BORD	41 F	1404.3	1404.8	1.0	18	2		
	536	ONDR	8 S	1404.8	1404.8	.2	65			
	2800	OTTA	40 F	1436.0	1437.5	6.0	7.4			
	536	ONDR	8 S	1437.0	1437	.2	110			
	930	BORD	41 F	1437.3	1437.3	1.5	21	3		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
				UT	UT	MINUTES	PEAK	MEAN		
26	2800	OTTA	20 GRF	1620.0	1633	30.0	2.6	1.3		
	2800	OTTA	26 FAL	1705.0	1715	10.0	-3.6	-1.8		
	2800	OTTA	20 GRF	1726.0	1732	40.0	3.6	1.6		
	2800	OTTA	1 S	1826.0	1826.5	2.0	3.6	1.6		
	2800	OTTA	20 GRF	1945.0	2020	60.0D	5.4			
	3750	TYKW	5 S	2207.4	2207.8	1.5	6	2		
	2000	TYKW	5 S	2207.5	2207.8	1.5	5	1.5		
	1000	TYKW	5 S	2207.5	2208	1.5	3	1		
	3750	TYKW	45 C	2210.0	2211.7	4.0	11	2.5		
	2000	TYKW	5 S	2210.0	2211.7	6.0	22	6		
	1000	TYKW	5 S	2211.0	2212	4.0	16 U	4 U		
	3750	TYKW	20 GRF	2240.0	2310	100.0	5	3		
	2000	TYKW	20 GRF	2240.0	2310	100.0	4	2		
	9400	TYKW	20 GRF	2326.0E	2326 U	50.0D	6 D	3 D		
27	260	ONDR	44 NS	0000.0E		390.0D	111	5		
	3750	TYKW	20 GRF	0102.0	0230	200.0	14	7		
	1000	TYKW	20 GRF	0110.0	0230	180.0	3	1.5		
	2000	TYKW	20 GRF	0110.0	0230	200.0	9	4		
	9400	TYKW	20 GRF	0115.0	0230	180.0	11	5		
	3100	CRIM	24 R	0650.0	0727.0		11			
	930	BORD	46 C	0724.0	0725.1	1.3	60	5		
	1470	POTS	4 S/F	0725.0	0725.2	1.5	13			
	113	POTS	4 S/F	0925.4	0925.5	.6	120	10		III
	3200	BERN	3 S	1008.0	1010.1	30.0	.0			ONLY PAPER REC
	2950	GORK	3 S	1008.5	1009.5	1.4	12	6		
	9100	GORK	1 S	1009.0	1009.2	1.7	15			
	5200	BERN	3 S	1009.0	1010.4	30.0	36.0			
	3000	POTS	3 S	1009.0	1010.5	2.5	25			
	3100	CRIM	3 S	1009.0	1009.5	2.0	26	8		
	2650	DWIN	1 S	1009.0	1010	2.0	15	10		
	8400	BERN	3 S	1009.1	1010.4	30.0	21.0			
	11800	BERN	3 S	1009.1	1010.4	30.0	13.0			
	1470	POTS	1 S	1009.5	1010.7	2.5	5.1			
	228	HARS	45 C	1009.6	1010.1	1.2	305	100		
	234	POTS	4 S/F	1009.8	1010.1	.9	240	10		III
	2950	GORK	29 PBI	1009.9	1010.0	33.2	7.9	4		
	9500	POTS	3 S	1010.0	1010.4	2.0	11			
	204	IZMI	7 C	1010.0	1010.5	1.3	450	220		
	113	POTS	4 S/F	1010.0	1010.3	.8	250	10		III
	930	BORD	41 F	1013.8	1014.1	.4	12	2		
	536	ONDR	42 SER	1241.5	1241.5	75.0	21			
	2800	OTTA	20 GRF	1545.0	1725	125.0	3.6	1.8		
	9400	HUAN	S	1720.5	1735.2	43.3	8.5	4.5		0
	2695	PENT	240 R	1925.0	2020	55.0	3.4	1.7		
	2800	OTTA	1 S	2051.0	2052.5	3.0	3.4	1.6		
28	2800	TYKW	5 S	0027.9	0028.1	.6	4	1.5		
	2800	TYKW	5 S	0144.0	0144.3	1.5	1.5	.5		
	2800	TYKW	45 C	0300.0	0300.8	1.5	5	1.5		
	9400	TYKW	20 GRF	0350.0	0435	90.0	4	2		
	3750	TYKW	21 GRF	0352.0	0354	80.0	2	1		
	2000	TYKW	20 GRF	0352.0	0435	80.0	2	1		
	3750	TYKW	45 C	0408.0	0408.4	2.0	2	.5		
	3750	TYKW	45 C	0420.0	0428.0	30.0	6	2		
	1000	TYKW	45 C	0521.3	0521.7	1.0	102	10		
	9400	TYKW	5 S	0548.3	0548.5	.7	4	1		
	3750	TYKW	5 S	0548.3	0548.5	.7	4	1		
	2000	TYKW	5 S	0548.3	0548.5	.7	4	1		
	1000	TYKW	5 S	0548.3	0548.5	.7	1	.3		
	260	ONDR	3 S	0814.8	0815	1.0	10	1		
	113	POTS	41 F	0926.2	0927.2	4.3	170	2		III
	3000	POTS	1 S	0956.0	0957	2.0	2.8			
	1470	POTS	1 S	0956.0	0957.1	2.0	3.0			
	3200	BERN	1 S	1010.0	1010.8	1.0	.0			ONLY PAPER REC
	5200	BERN	1 S	1010.1	1010.8	1.0	6.0			
	1470	POTS	4 S/F	1020.5	1022.2	2.2	11			
	9500	POTS	3 S	1106.0	1106.6	1.5	45			
	5200	BERN	3 S	1108.2	1109.9	25.0	10.0			
	9400	HUAN	S	1214.6	1239.4	36.9	6.0	1.2		0
	2650	DWIN	2 S/F	1238.0	1239	3.0	40	30		
	430	KRAK	4 S/F	1238.0	1238.5	2.0	340	20		
	808	ONDR	4 S/F	1238.0	1238.8	2.5	85	30		
	3200	BERN	3 S	1238.2	1239.5	20.0	.0			ONLY PAPER REC
	5200	BERN	3 S	1238.2	1239.3	20.0	12.0			
	536	ONDR	4 S/F	1238.3	1239.5	2.5	91	20		
	1470	POTS	4 S/F	1238.5	1239.1	3.0	175 U			
	3000	POTS	4 S/F	1238.5	1239.6	3.0	51			
	810	KRAK	4 S/F	1238.5	1241.2	1.7	125	30		
	930	BORD	46 C	1238.6	1239.4	2.2	218	18		
	2800	OTTA	4 S/F	1238.7	1239.5	2.3	36.0	18.0		
	260	ONDR	8 S	1238.8	1239.2	1.0	37			
	9500	POTS	1 S	1239.0	1239.9	2.5	5.4			
	808	ONDR	3 S	1314.3	1314.3	.2	25			
	536	ONDR	8 S	1327.2	1327.2	.2	25			

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
28	113	POTS	42	SER	1418.8	1419.0	4.6	450	7		III
	2800	OTTA	23	GRF	1500.0	1725	255.0	6.2	3.2		
	9400	HUAN		S	1606.1	1608.4	10.1	4.5	1.7		0
	2800	OTTA	1	S	1607.5	1608.2	2.0	5.4	1.8		
	930	BORD	41	F	1608.0	1608.2	.7	209	6		
	2800	OTTA	8	S	1635.0	1635.1	.3	2.6			
	2800	OTTA	1	S	1946.8	1947.5	3.0	3.6	1.6		
	2800	OTTA	20	GRF	2020.0	2030	20.0	2.4	1.2		
	2695	PENT	240	R	2050.0	2120	30.0	3.4	1.7		
	2695	PENT	21	GRF	2225.0		35.0	2.4			
	3750	TYKW	45	C	2228.0	2229.2	2.0	4	1		
	2000	TYKW	45	C	2228.5	2229.0	1.5	11	3		
	2695	PENT	3	S	2228.5	2229	1.0	16.2	8.0		
	1000	TYKW	45	C	2242.0	2259	40.0	10	3		
	9400	TYKW	5	S	2250.6	2250.8	.5	6	2		
	1000	TYKW	5	S	2332.4	2332.8	.7	20	5		
29	3750	TYKW	21	GRF	0005.0	0018.5	60.0	4	1		
	3750	TYKW	21	GRF	0220.0	0325	270.0	8	3.5		
	3750	TYKW	5	S	0236.0	0236.3	1.0	2	.5		
	9400	TYKW	5	S	0236.0	0236.3	2.0	5	1.5		
	9400	TYKW	20	GRF	0240.0	0330	90.0	2	1		
	2000	TYKW	21	GRF	0240.0	0325	250.0	3	1.5		
	1000	TYKW	45	C	0244.0	0244.3	1.0	3	1		
	2000	TYKW	8	S	0244.2	0244.3	.4	1.5	.5		
	3750	TYKW	5	S	0322.5	0323.0	1.5	3	1		
	3750	TYKW	20	GRF	0455.0	0542	105.0	6	2.5		
	2000	TYKW	20	GRF	0510.0	0550	90.0	2	1		
	9400	TYKW	20	GRF	0535.0	0542	85.0	4	2		
	260	ONDR	42	SER	0836.0	1023.7	107.0	10			
	810	KRAK	3	S	0927.5U	0928.2U	1.5U	66	30 U		
	33	UPIC	2	S/F	1128.8	1129.2	.9				
	29	UPIC	2	S/F	1129.0	1129.2	.6				
	3200	BERN	4	S/F	1139.0	1141.5	38.0	.0			ONLY PAPER REC
	3100	CRIM	1	S	1139.0	1141.5	5.0	11	4		
	8400	BERN	4	S/F	1139.1	1141.5	29.0	36.0			
	5200	BERN	4	S/F	1139.1	1141.5	38.0	30.0			
	11800	BERN	4	S/F	1139.1	1141.5	24.0	39.0			
	1470	POTS	3	S	1140.0	1141.7	3.5	9.1			
	9500	POTS	29	PBI	1140.0	1141.5	25.0	31			
	536	ONDR	45	C	1140.0	1141.4	3.0	22	3		
	10715	DWIN	2	S/F	1140.0	1142	3.0	15	10		
	2650	DWIN	1	S	1140.0	1141	2.0	10	8		
	930	BORD	41	F	1140.0	1140.6	2.0	26	2		
	810	KRAK	42	SER	1140.5	1141.7	2.2	86			
	3000	POTS	4	S/F	1140.5	1141.5	4.5U	16			
	650	GORK	3	S	1140.7	1142.5	5.2	3	1.5		
	9100	GORK	3	S/F	1140.7	1142.5	5.2	38			
	2950	GORK	2	S/F	1140.9	1142.5	5.4	11			
	228	HARS	45	C	1246.3	1246.4	2.0	32	13		
	113	POTS	8	S	1317.0	1317.1	.2	200	60		III
	2800	OTTA	2	S/F	1511.0	1512	10.0	3.2	1.6		
	930	BORD	41	F	1527.7	1527.9	8.3	21	2		
	2800	OTTA	40	F	1531.5	1534.4	3.5	15.2			
	3200	BERN	4	S/F	1532.1	1534.0	4.0	.0			ONLY PAPER REC
	5200	BERN	4	S/F	1532.1	1534.1	4.0	26.0			
	2800	OTTA	32	ABS	1536.0	1552	45.0	-3.6	-1.0		
	2800	OTTA	8	S	1624.1	1624.2	.3	3.6			
	2800	OTTA	20	GRF	1650.0	1723	75.0	2.2	1.1		
30	127	TORN	43	NS	0714.0	0917.2	406.0	560	3		V1
	100	GORK	43	NS	0800.0U		180.0U		5		
	9400	TYKW	21	GRF	0045.0	0126	200.0	5	2		
	3750	TYKW	21	GRF	0045.0	0150	210.0	6	3		
	2000	TYKW	21	GRF	0050.0	0140	200.0	3	1.5		
	2000	TYKW	45	C	0119.0	0126.3	12.0	8	1.5		
	1000	TYKW	45	C	0119.5	0120.3	1.5	2	.7		
	1000	TYKW	45	C	0122.9	0123.0	.3	4	1		
	1000	TYKW	45	C	0125.0	0127.5	3.0	10	.7		
	3750	TYKW	5	S	0125.0	0126.2	3.0	5	1.5		
	1000	TYKW	45	C	0204.0	0205.7	2.5	178	15		
	2000	TYKW	45	C	0204.0	0205.7	3.0	13	4		
	500	HIRA	46	C	0204.3	0205.5	2.0	37	14		0
	200	HIRA	8	S	0205.5	0205.7	.4	315			0
	3750	TYKW	45	C	0205.5	0205.7	1.5	3	.5		
	100	HIRA	8	S	0205.6	0205.7	.3	9900			WL
	3750	TYKW	5	S	0232.0	0232.2	1.0	2	.5		
	9400	TYKW	20	GRF	0313.0	0320	40.0	5	2.5		
	1000	TYKW	45	C	0314.0	0315.4	2.0	49	6		
	3750	TYKW	5	S	0315.0	0315.3	2.0	2	.5		
	2000	TYKW	5	S	0315.0	0315.4	1.0	5	1.5		
	1000	TYKW	45	C	0345.0	0345.7	5.0	8	2		
	9400	TYKW	20	GRF	0420.0	0450	60.0	3	1.5		
	3750	TYKW	20	GRF	0420.0	0500	100.0	3	1.5		
	2000	TYKW	20	GRF	0420.0	0440	60.0	2	1		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE		STARTING TIME	TIME OF MAXIMUM	DURATION	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1}		INT	POLARIZATION OR REMARKS
					UT	UT	MINUTES	PEAK	MEAN		
30	9400	TYKW	5	S	0602.2	0602.4	.5	6	1.5		
	9400	TYKW	5	S	0620.0	0620.8	1.5	5	1.5		
	2800	TYKW	5	S	0620.3	0620.8	1.0	3	1		
	3750	TYKW	5	S	0620.5	0621.0	1.0	2	.7		
	3100	CRIM	1	S	0715.7	0716.1	.5	9	3		
	930	BORD	41	F	0722.0	0725.4	4.6	17	3		
	260	ONDR	42	SER	0813.5	0949.6	123.0	13			
	2800	OTTA	240	R	1255.0	1315	20.0	5.8	2.9		
	2800	OTTA	24	R	1320.0	1330	10.0	3.6	1.8		
	2800	OTTA	27	RF	1320.0		290.0	3.6	3.4		
	2800	OTTA	24P	R	1330.0		270.0	3.6			
	260	ONDR	4	S/F	1346.5	1347.3	1.5	10	2		
	2800	OTTA	26	FAL	1800.0	1810	10.0	-3.6	-1.8		
	2695	PENT	27	RF	2005.0		125.0	3.6	3.0		
	2695	PENT	24	R	2005.0	2025	20.0	3.6	1.0		
	2695	PENT	24P	R	2025.0		85.0	3.6			
	2695	PENT	26	FAL	2150.0	2210	20.0	-3.6	-1.8		
	1000	TYKW	5	S	2329.0	2329.6	1.5	13	2.5		
	9400	TYKW	5	S	2330.0	2330.7	1.5	9	2		
	3750	TYKW	5	S	2330.0	2330.6	2.0	4	1		
31	260	ONDR	44	NS	0002.0E		416.0D	155			
	9400	TYKW	21	GRF	0040.0	0140	220.0	8	4		
	2800	TYKW	21	GRF	0040.0	0140	220.0	4	2		
	3750	TYKW	21	GRF	0040.0	0140	340.0	8	4		
	1000	TYKW	8	S	0144.9	0145.0	.3	10	3		
	2800	TYKW	5	S	0202.0	0202.6	1.5	5	1.5		
	3750	TYKW	5	S	0202.0	0202.6	1.5	2.5	.8		
	1000	TYKW	5	S	0202.0	0202.5	2.0	7	2		
	9400	TYKW	5	S	0204.6	0204.8	.5	3	1		
	2800	TYKW	5	S	0204.7	0204.8	.5	5	1.5		
	3750	TYKW	5	S	0204.7	0204.8	.5	2.5	.8		
	1000	TYKW	5	S	0204.7	0204.9	.5	43	10		
	1000	TYKW	45	C	0205.4	0206.2	1.5	4.5	.5		
	9400	TYKW	45	C	0241.0	0242.0	7.0	6	1.5		
	3750	TYKW	45	C	0241.0	0244	12.0	2.5	1		
	3750	TYKW	20	GRF	0322.0	0328	50.0	2	1		
	9400	TYKW	5	S	0324.0	0325.2	2.5	4	1.5		
	3100	CRIM	20	GRF	0647.0	0936.0	349.0	8	3		
	204	IZMI	41	F	0732.7	0732.7	2.0	300			
	234	POTS	4	S/F	0732.7	0732.8	.2	430	20		III
	536	ONDR	42	SER	0903.0	0932.7	34.0	104			
	930	BORD	41	F	0904.0	0904.4	.6	22	2		
	113	POTS	42	SER	0926.2	0932.7	14.0	2100	20		III
	204	IZMI	41	F	0926.5	0928.2	13.5	800			
	430	KRAK			0931.0	0937.0		220			
	430	KRAK	42	SER	0931.0	0932.7	6.0	430			
	930	BORD	41	F	0931.2	0932.6	2.0	178	2		
	810	KRAK			0932.0	0937.5		80			
	810	KRAK	42	SER	0932.0	0933.0	5.5	150			
	1470	POTS	8	S	0932.5	0932.7	.5	3.7			
	234	POTS	42	SER	0932.6	0936.8	4.9	2300	15		III
	228	HARS	45	C	0936.5	0937.0	1.2	365	35		
	113	POTS	42	SER	1121.5	1203.5	41.0	350	1	E	III
	204	IZMI	41	F	1149.5	1150.0	4.5	300			
	536	ONDR	42	SER	1152.5	1304.2	130.0	124			
	930	BORD	41	F	1152.8	1152.9	.6	16	2		
	810	KRAK			1153.0	1200.2		30			
	810	KRAK	42	SER	1153.0	1153.3	7.0	11			
	430	KRAK	42	SER	1153.0	1153.2	7.0	140			
	430	KRAK			1153.0	1154.5		40			
	930	BORD	8	S	1203.4	1203.7	.4	20	2		
	808	ONDR	42	SER	1234.0	1304.7	38.0	162			
	930	BORD	8	S	1234.2	1234.2	.1	20	1		
	810	KRAK	42	SER	1234.3	1234.3	72.0	100			
	810	KRAK			1234.3	1311.5		60			
	430	KRAK	42	SER	1234.3	1234.3	73.5	90			
	430	KRAK			1234.3	1255.0		460			
	810	KRAK			1234.3	1254.5		160			
	810	KRAK			1234.3	1304.5		700			
	430	KRAK			1234.3	1251.0		230			
	430	KRAK			1234.3	1304.8		1100			
	3000	POTS	3	S	1238.9	1239.5	1.3	13			
	2650	DWIN	8	S	1239.0			50			
	930	BORD	8	S	1239.6	1239.6	.1	26	1		
	228	HARS	45	C	1247.0	1253.0	8.0	520	30		
	234	POTS	42	SER	1250.8	1304.3	14.0	1900	20		III
	113	POTS	42	SER	1250.9	1304.1	15.0	700	2		III
	930	BORD	8	S	1251.0	1251	.1	48	1		
	930	BORD	41	F	1254.0	1254.3	.8	101	2		
	228	HARS	45	C	1303.0	1303.1	1.0	520	145		
	930	BORD	41	F	1303.3	1304.3	1.5	208	3		
	930	BORD	8	S	1311.4	1311.4	.1	160	1		
	930	BORD	41	F	1406.8	1407.4	1.8	203	1		
	2800	OTTA	20	GRF	1730.0	1740	45.0	2.8	1.8		

SOLAR RADIO EMISSION
OUTSTANDING OCCURRENCES

OCTOBER 1980

DAY OF MONTH	FREQUENCY	STATION	TYPE	STARTING TIME UT	TIME OF MAXIMUM UT	DURATION MINUTES	FLUX DENSITY 10^{-22} Wm^{-2} Hz^{-1} PEAK	FLUX DENSITY MEAN	INT	POLARIZATION OR REMARKS
31	2800	OTTA	240 R	1930.0	2010	40.0	3.2	1.6		
	2800	OTTA	1 S	2026.0	2027.5	3.0	3.6	1.8		
	2695	PENT	20 GRF	2100.0	2145	80.0	4.0	3.0		
	9400	TYKW	5 S	2155.3	2155.7	1.0	9	3		
	1000	TYKW	45 C	2222.6	2223.4	1.0	35	10		
	2000	TYKW	5 S	2250.0	2250.3	1.0	1	.3		
	3750	TYKW	5 S	2250.0	2250.3	1.0	2.5	.8		
	9400	TYKW	5 S	2250.0	2250.3	.7	6	1.5		
	9400	TYKW	21 GRF	2320.0	0137	180.0	6	2		
	3750	TYKW	20 GRF	2320.0	0130	180.0	6	3.5		
	2000	TYKW	20 GRF	2320.0	0130	180.0	4	2		
	1000	TYKW	20 GRF	2325.0	0100	160.0	3	1.5		

Reports are received routinely from the following observatories:

ARCE = Arcetri
BERN = Berne
BORD = Bordeaux
CRIM = Crimea
DWIN = Dwingeloo
GORK = Gorky
HARS = Harestua
HIRA = Hiraiso
HUAN = Huancayo
IRKU = Irkutsk
IZMI = IZMIRAN
KISV = Kislovodsk
KRAK = Krakow
MANI = Manila
NAGO = Nagoya
NOBE = Nobeyama
ONDR = Ondrejov
OTTA = Ottawa
PENT = Penticton
POTS = Potsdam
SAOP = Sao Paulo
SGMR = Sagamore Hill
SYDN = Sydney
TORN = Torun
TYKW = Toyokawa
TRST = Trieste
UPIC = Upice
VORO = Voroshilov

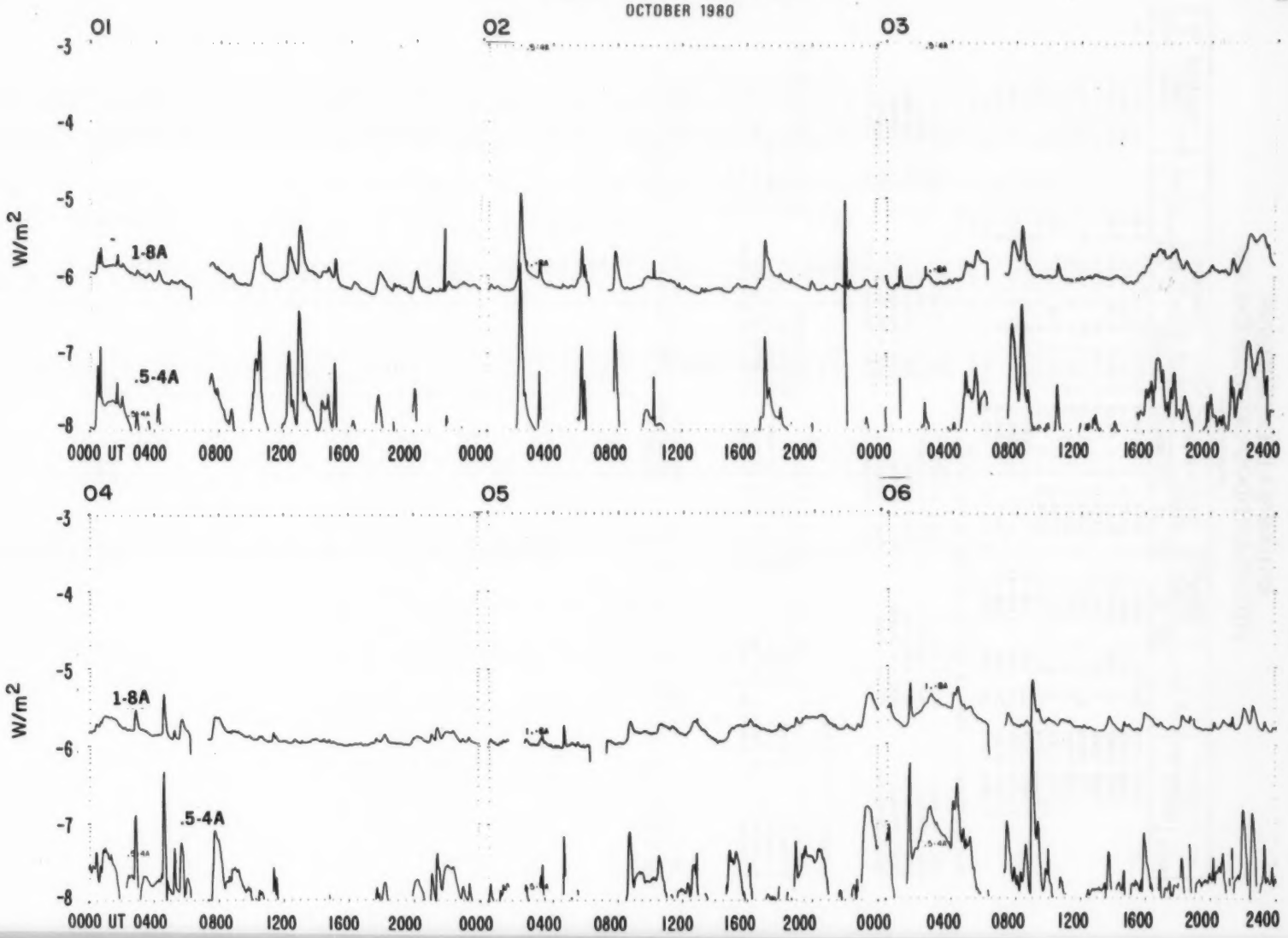
Explanation of Type Code:

1 Simple 1
2 Simple 1F
3 Simple 2
4 Simple 2F
5 Simple
6 Minor
7 Minor +
8 Spike
20 Simple 3
21 Simple 3A
22 Simple 3F
23 Simple 3AF
24 Rise
25 Rise A
26 Fall
27 Rise and Fall
28 Precursor
29 Post Burst Increase
30 Post Burst Increase A
31 Post Burst Decrease
32 Absorption
40 Fluctuation
41 Group of Bursts
42 Series of Bursts
43 Onset of Noise Storm
44 Noise Storm in Progress
45 Complex
46 Complex F
47 Great Burst
48 Major
49 Major +

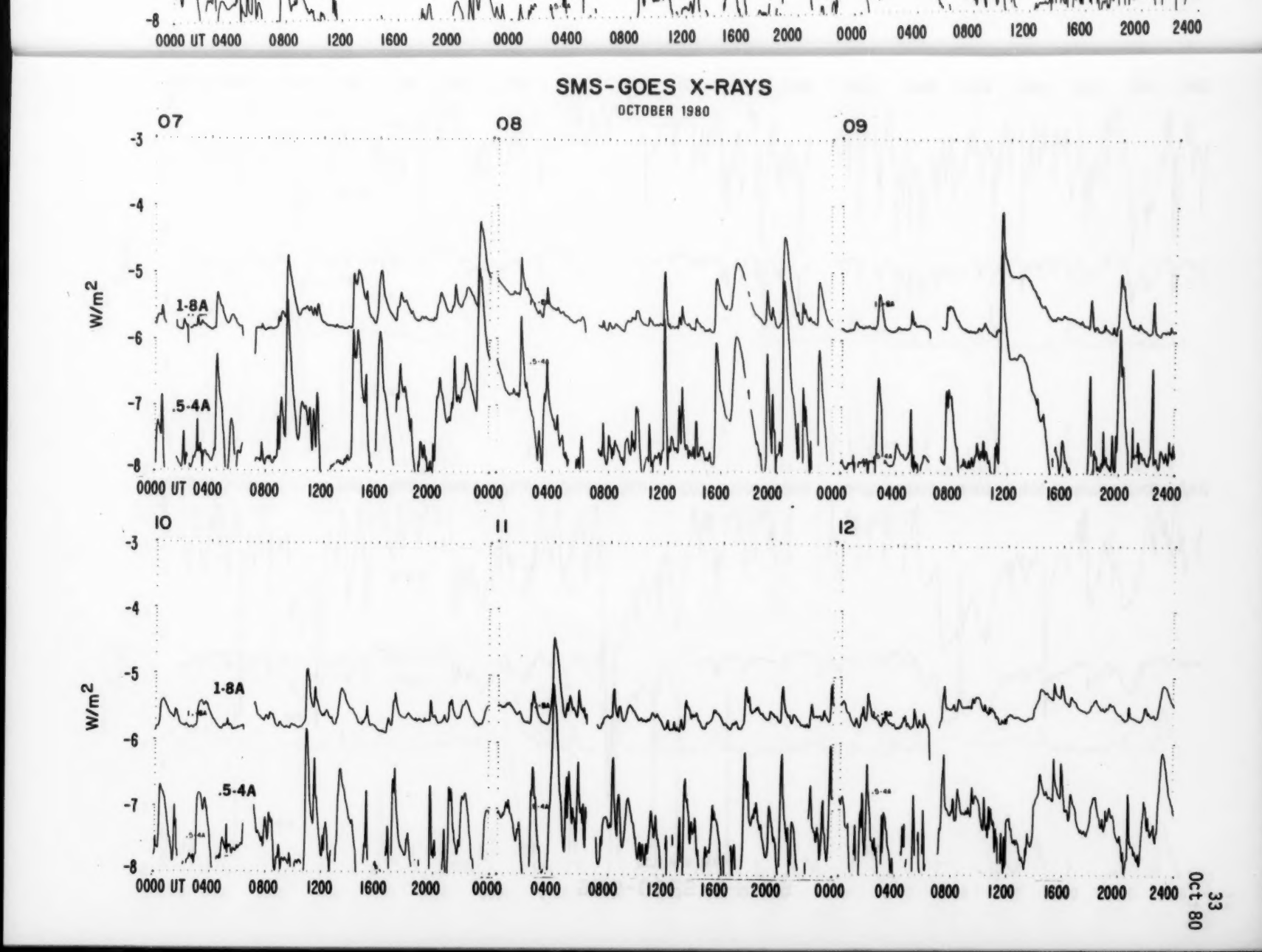
1A Simple 1A
3A Simple 2A
21A Simple 3A GRF
2A Simple 1AF
4A Simple 2AF
240 Rise only
240F Rise only F
24P Post Rise
24PF Post Rise F
26A Fall A
260 Fall Only
26F Fall F
27F Rise and Fall F
27AF Rise and Fall AF
31A P.B. Decrease A
32A Absorption A
46F Complex F

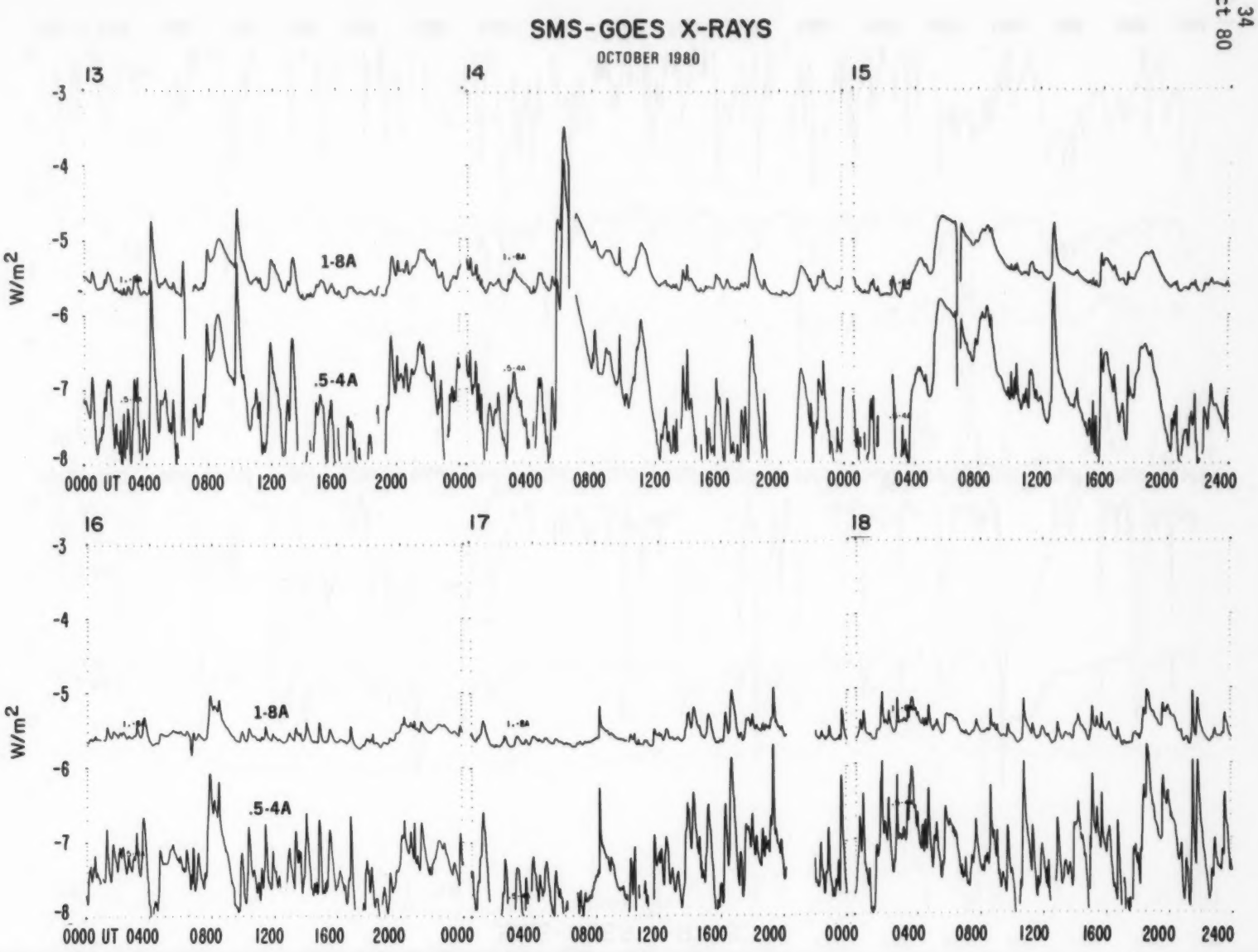
SMS-GOES X-RAYS

OCTOBER 1980

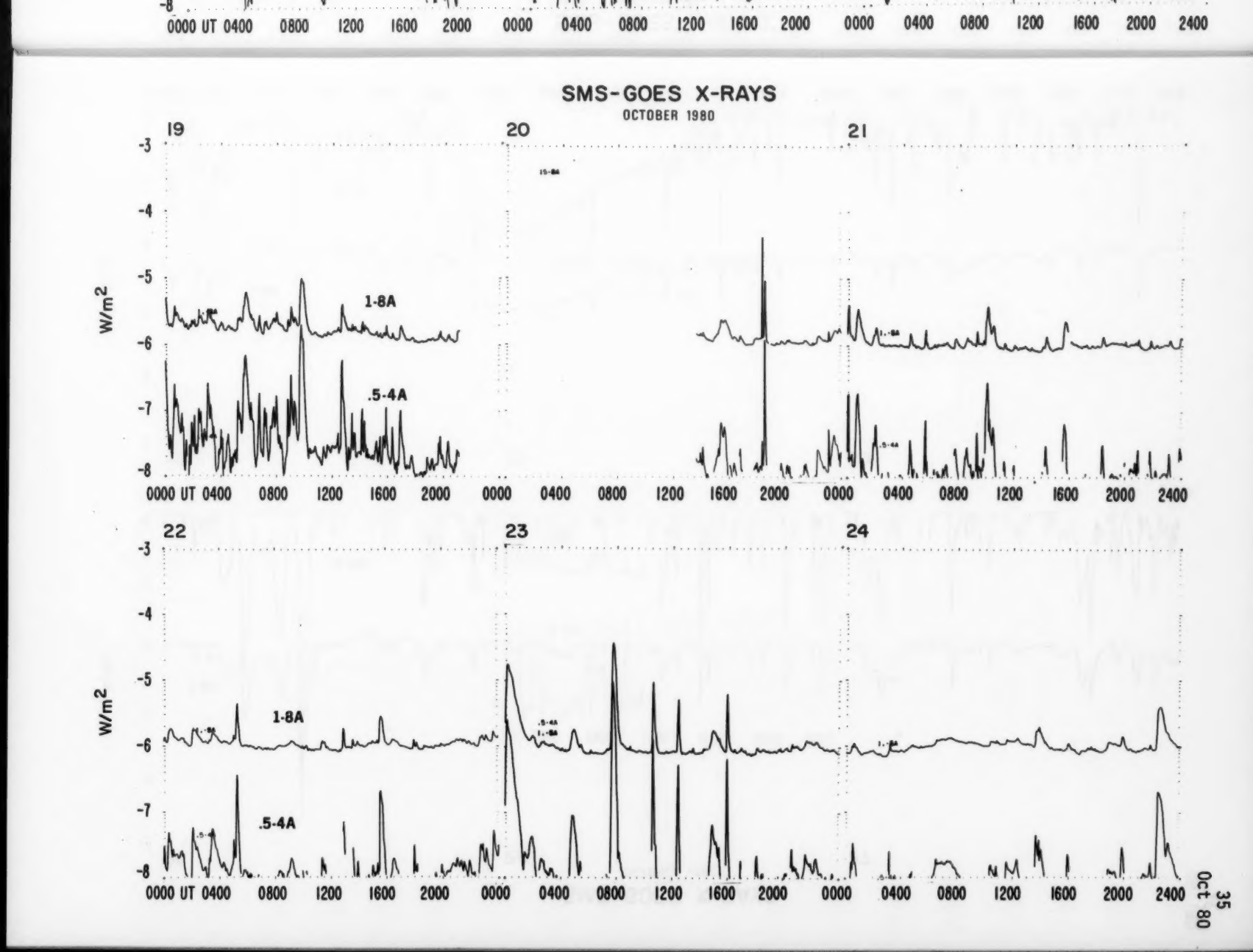


SMS-GOES X-RAYS


SMS-GOES X-RAYS
OCTOBER 1980
07
08
09
10
11
12
W/m2
1-8A
.5-4A
-3
-4
-5
-6
-7
-8
0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400
33
Oct 80

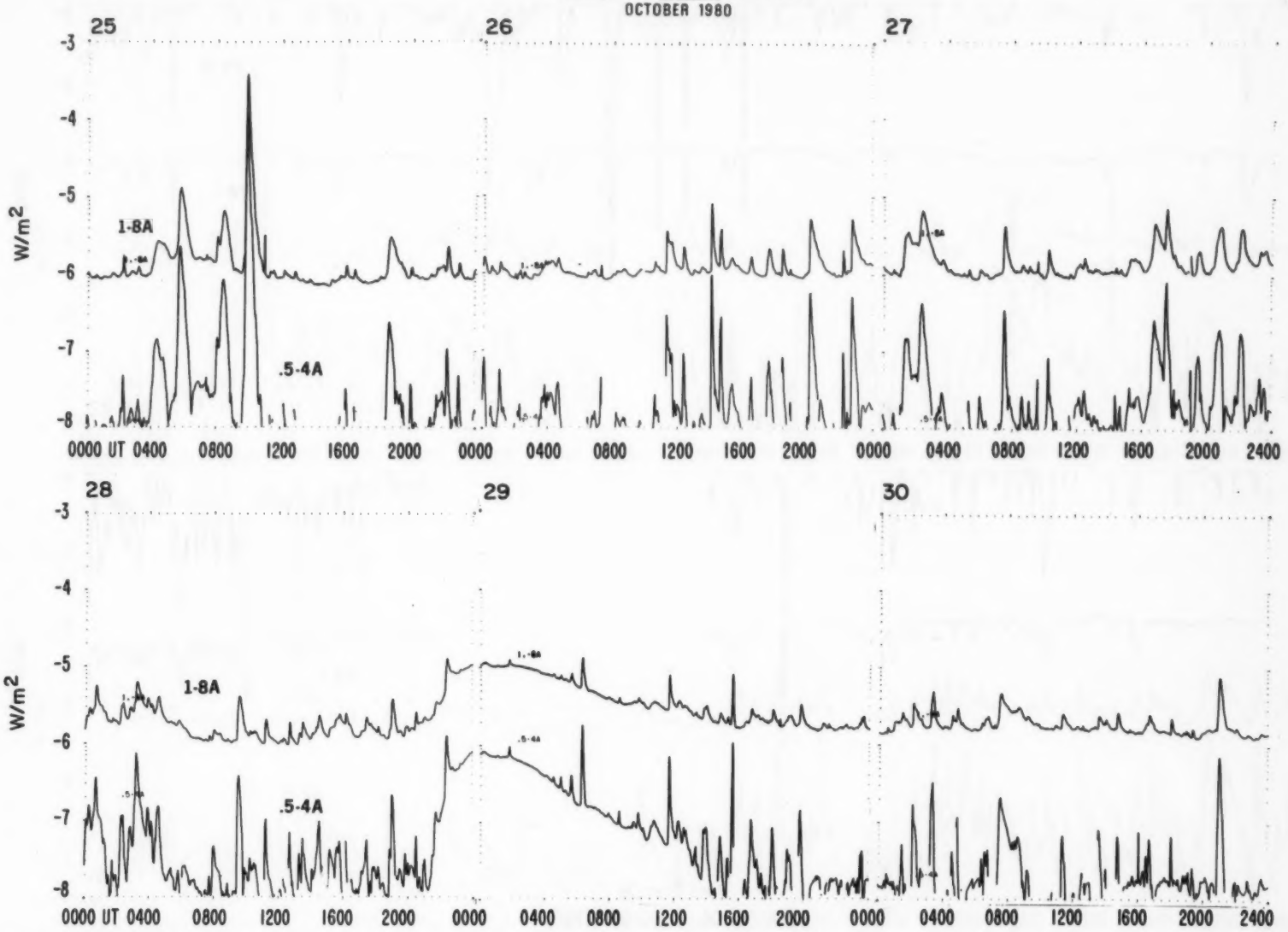


SMS-GOES X-RAYS


SMS-GOES X-RAYS
OCTOBER 1980
19
20
21
22
23
24
W/m2
-3
-4
-5
-6
-7
-8
1-8A
.5-4A
0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400
35
Oct 80

SMS-GOES X-RAYS

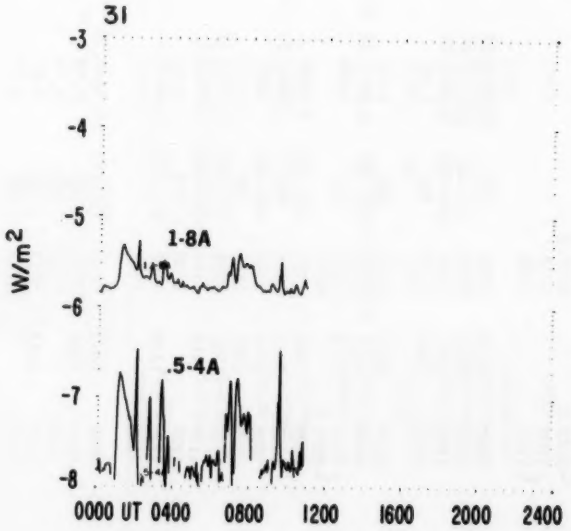
OCTOBER 1980



0000 UT 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 0000 0400 0800 1200 1600 2000 2400

SMS-GOES X-RAYS

OCTOBER 1980



MASS EJECTIONS FROM THE SUN

OCTOBER 1980

Station	Date 1980	Observed UT Start	Max	End	Location RA°	R/R_0	Wavelength	Type of Events
DWIN	Oct 01	1506.0		1512			Decimeter	IV
HARV	Oct 02	2202		2213			Meter	II
CULG	Oct 02	2204.5		2214			Meter	II Herringbone
BIGB	Oct 03	0036	0041	0042	083	1.0	H-alpha	A
WEND	Oct 03	1025E		1115D	118-162	1.67	H-alpha	Q or SP
WEND	Oct 03	1530E		1614D	082	1.05	H-alpha	A
WEND	Oct 04	0909		1306D	068-078	0.99-1.04	H-alpha	A
CULG	Oct 04	2146		2157			Decimeter	IV
DWIN	Oct 06	0829.0		0833.5			Decimeter	IV
DWIN	Oct 06	1019.6		1020.2			Decimeter	IV
DWIN	Oct 06	1035.0		1049			Decimeter	IV Pulsations
CULG	Oct 07	0223		0237			Meter	II
LEAR	Oct 07	0223.3		0229.2			Meter	II
HARV	Oct 07	1700		1709			Meter	II
HARV	Oct 07	1702		1706			Meter	IV Pulsations
KHAR	Oct 11	0813	0813	1200	310	0.85-0.94	H-alpha	EL
KHAR	Oct 11	0914	0915	1020	316-328	0.21-0.28	H-alpha	EL
KHAR	Oct 11	1131	1131	1136	290-298	0.28-0.30	H-alpha	S
HALE	Oct 11	2021E	2026	2125	294	1.18	H-alpha	Q
KHAR	Oct 12	0837	0843	0853	281	0.43	H-alpha	S
KHAR	Oct 12	0855	0858	0930	265-268	0.52-0.58	H-alpha	A
KHAR	Oct 12	0919	0919	1040	281	0.54	H-alpha	S
DWIN	Oct 12	0923.5		0944			Decimeter	IV
KHAR	Oct 12	0928	0940	1007	126-137	0.70	H-alpha	Q
KHAR	Oct 12	0953	0955	1015	076	1.00-1.03	H-alpha	S
KHAR	Oct 12	0955	1005	1020	258-262	0.89	H-alpha	EL
KHAR	Oct 12	1025	1025	1042	285	0.54	H-alpha	S
KHAR	Oct 12	1102	1102	1126	277-281	0.49-0.54	H-alpha	EL
KHAR	Oct 12	1110	1115	1144	292-298	0.39-0.46	H-alpha	EL
KHAR	Oct 12	1224		1238	321	0.16	H-alpha	S
KHAR	Oct 12	1225	1230	1240	277-281	0.49-0.54	H-alpha	EL
DWIN	Oct 12	1519		1522			Decimeter	IV
KHAR	Oct 13	0830	0848	0915	276-281	0.72-0.75	H-alpha	EL
KHAR	Oct 13	0903	0913	0920	085	0.89	H-alpha	S
KHAR	Oct 13	1130		1136	278	0.74	H-alpha	S
KHAR	Oct 13	1137	1142	1213	085	0.85	H-alpha	S
KHAR	Oct 13	1143		1213	281	0.75	H-alpha	S
CULG	Oct 14	0616		0646			Meter	II
LEAR	Oct 14	0617.2		0622.6			Meter	II
CULG	Oct 14	0619		0621			Decimeter; meter	IV
WEIS	Oct 14	0619.2		0622.4			60-140	II Harmonic
LEAR	Oct 14	0712.7		1010.0			Meter	IV
KHAR	Oct 14	0855	0950	1050	199-229	0.21-0.28	H-alpha	EL
KHAR	Oct 14	0934	0940	1010	299-233	0.31-0.39	H-alpha	SP
KHAR	Oct 14	0946	0947	1030	288-291	0.46-0.51	H-alpha	S
KHAR	Oct 14	1050		1135	283	0.82	H-alpha	S
CULG	Oct 15	0514		0542			Meter	IV Weak
CULG	Oct 15	0519.5		0549			Meter	II
CULG	Oct 18	2136		2140			Meter	Possible II, Weak
CULG	Oct 20	0534		0540			Meter	II
DWIN	Oct 20	1508.0		1510.5			Decimeter	IV
CULG	Oct 21	0434.5		0447			Meter	II
LEAR	Oct 21	0435.3		0449.1			Meter	II

MASS EJECTIONS FROM THE SUN

OCTOBER 1980

Station	Date 1980	Observed UT Start	Max	End	Location RA°	R/R_o	Wavelength	Type of Event
DWIN	Oct 22	1529.0		1541.0			Decimeter	IV
LEAR	Oct 22	2358.4		0021.0			Meter	IV
CULG	Oct 23	0000		0053			Decimeter	IV Pulsations
CULG	Oct 23	0003		0209			Meter	IV
CULG	Oct 23	0004		0010			Meter	Possible II
LEAR	Oct 23	0009.0		0146.0			Meter	IV
DWIN	Oct 23	0730		0752			Decimeter	IV Fiber bursts
BLEN	Oct 23	0735.5		0749.4			Meter	IV Pulsations
LEAR	Oct 23	0750.0		0820.0			Meter	IV
DWIN	Oct 23	1042.8		1055			Decimeter	IV
DWIN	Oct 23	1219.0		1220.0			Decimeter	IV
DWIN	Oct 23	1221.0		1230.0			Decimeter	IV Pulsations
DWIN	Oct 23	1458.4		1503.0			Decimeter	IV
DWIN	Oct 23	1549.8		1558.5			Decimeter	IV
CULG	Oct 24	2229		2340			Meter	IV
DWIN	Oct 25	0754.0		0810			Decimeter	IV
DWIN	Oct 25	0819.0		0823.0			Decimeter	IV
DWIN	Oct 25	0939.0		0953.0			Decimeter	IV
DWIN	Oct 25	1028.1		1029.9			Decimeter	IV
HALE	Oct 26	2112E		2116D	300	1.20	H-alpha	Q
WEND	Oct 27	1219	1229	1248	061	0.99-1.06	H-alpha	SP
CULG	Oct 27	2046		2054			Meter	Possible II
DWIN	Oct 28	1238.6		1240.6			Decimeter	IV Pulsations
WEND	Oct 28	1402	1421	1433D	220	1.12	H-alpha	A
CULG	Oct 28	2147		2200			Meter	Possible II
WEND	Oct 29	0733E		0855	088	1.05	H-alpha	S
WEND	Oct 29	1000E		1433D	083-088	1.08	H-alpha	A or S
BIGB	Oct 30	2242	2258	2323	072	1.0	H-alpha	A
BIGB	Oct 30	2333	2342	2342D	071-073	1.0	H-alpha	A

QUALIFIERS ON START, MAX AND END TIMES
D = event ended after the tabulated time
E = event began before the tabulated time
U = uncertain time

TYPE OF EVENT
A = eruptive active region prominence
CB = coronal cloud bubble
D = coronal depletions
E = coronal enhancement
EL = coronal expanding loop
II = Type II radio burst
IVm = moving Type IV radio burst
Q = eruptive quiescent prominence
R = coronal ray or streamer
S = flare-surge if there is a known flare association
SP = flare-spray if there is a known flare association

* = movement may be caused by ionospheric refraction

REPORTING STATIONS
BIGB = Big Bear
BLEN = Bleien
CULG = Culgoora
DWIN = Dwingeloo
GEOR = Georgiana
HALE = Haleakala
HAOC = High Altitude Observatory's SMM Coronagraph/Polarimeter
HAOK = High Altitude Observatory's MARK-III Coronameter at Mauna Loa
HARV = Harvard (Fort Davis)
LEAR = Learmonth
MANI = Manila
MITK = Mitaka
NRLC = Naval Research Laboratory's White-Light Coronagraph Experiment on P78-1
PALE = Palehua
SGMR = Sagamore Hill
TELV = Tel Aviv
WEIS = Weissenau
WEND = Wendelstein
UDAI = Udaipur

NOTE: Because only a small fraction of the data taken by satellite-borne coronagraph had been analyzed at the time this table was assembled, many events are defined solely by ground-based observatory reports.

SGD 440 Part II (Comprehensive)

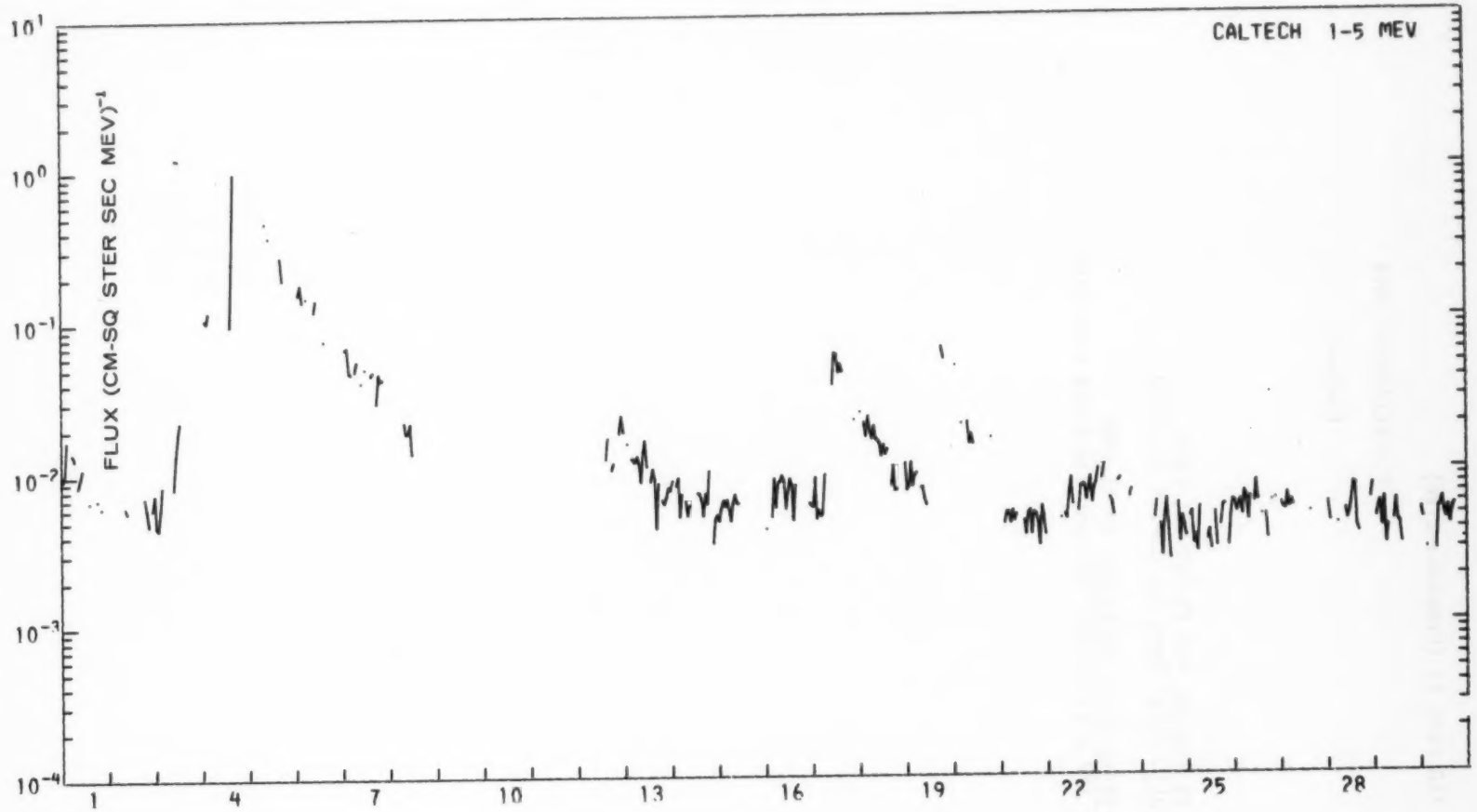
MISCELLANEOUS DATA

Contents

	Page
Active Regions Aug 29-Sep 25, 1980	47
Synoptic Solar Maps Aug 29-Sep 25, 1980	48
Energetic Solar Particles April 1980	
IMP 8 Electrons, Protons and Alpha Particles	42-46

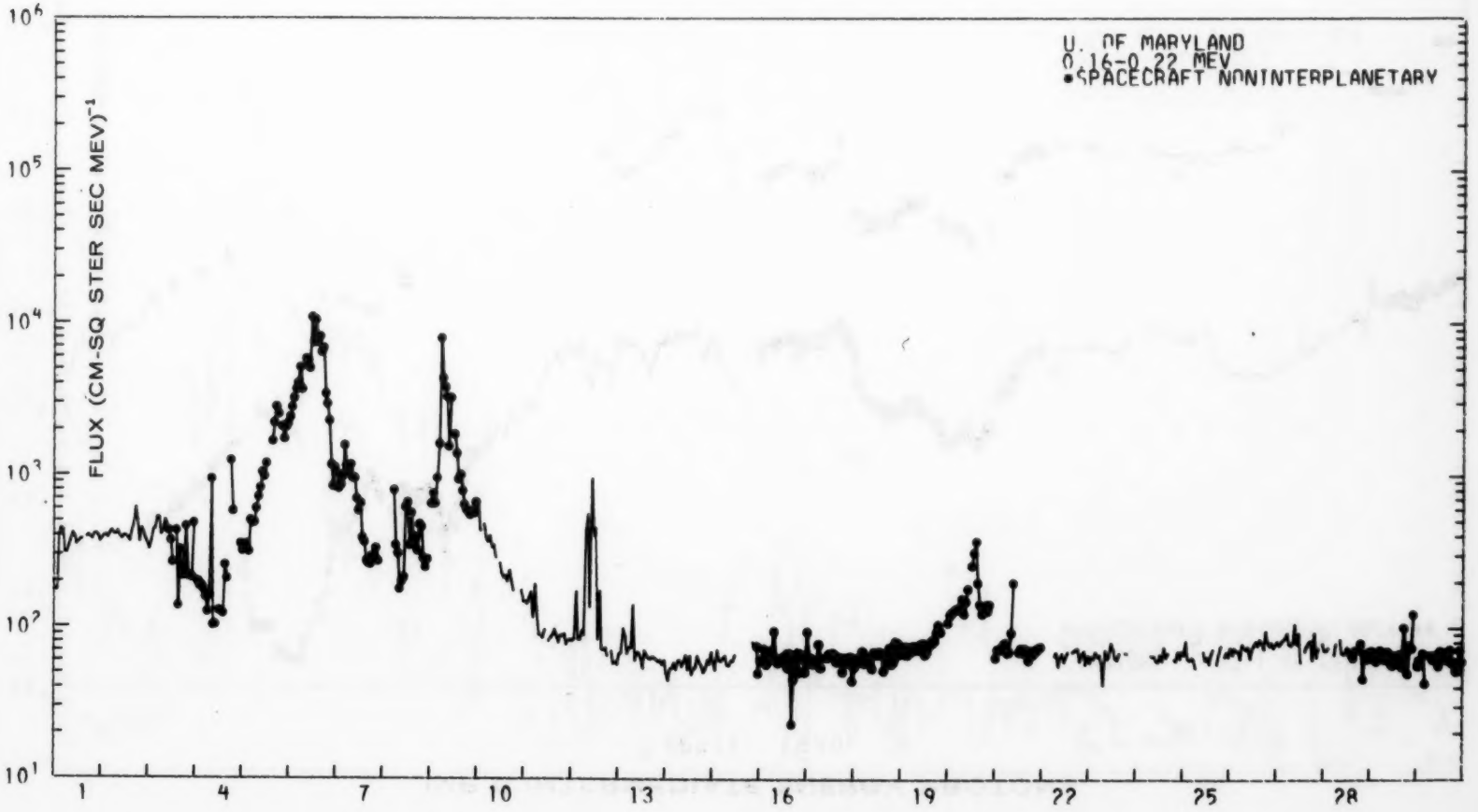
IMP 8 ELECTRONS

APRIL, 1980



IMP 8 LOW ENERGY PROTONS

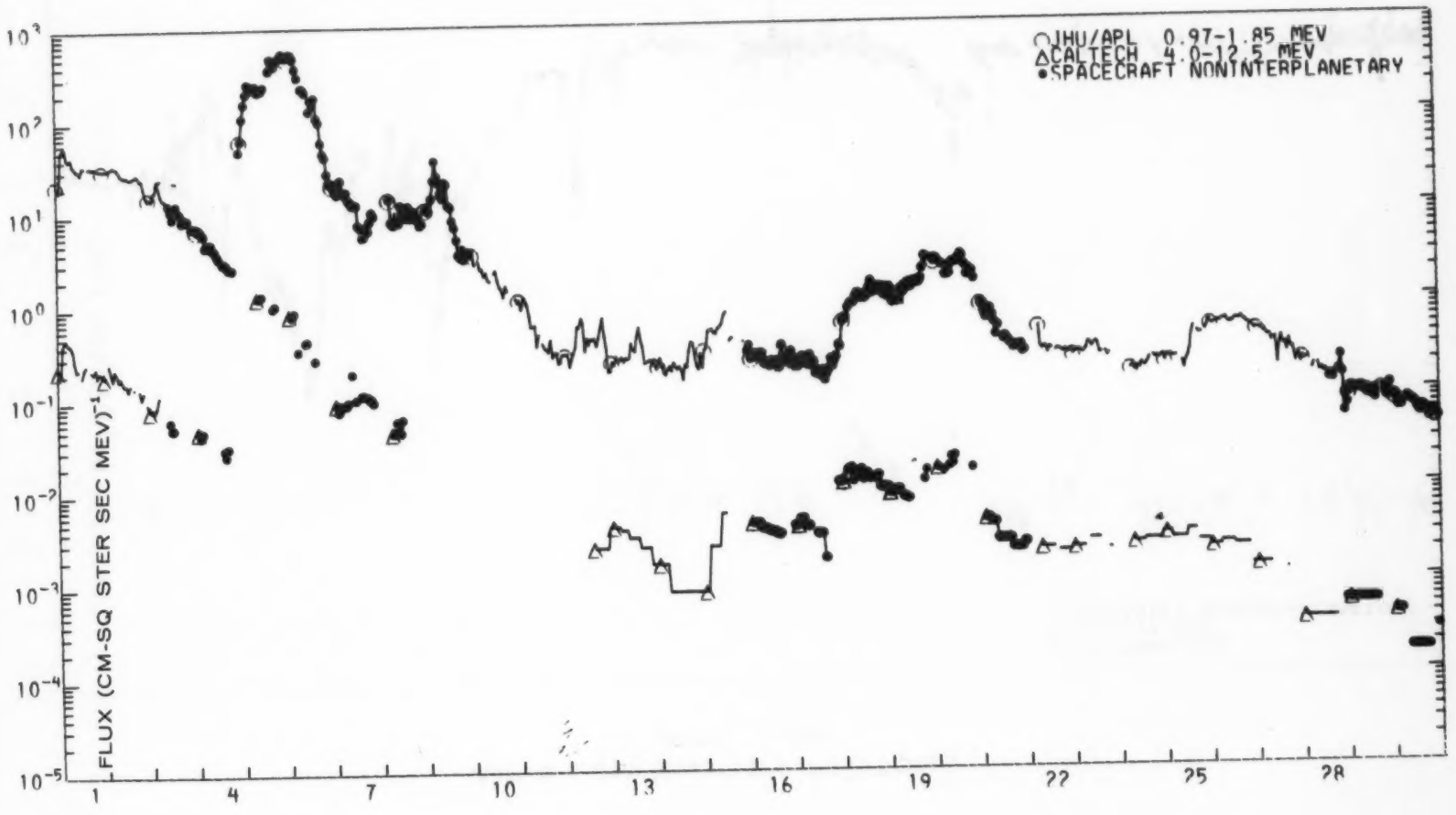
APRIL, 1980



43
Misc
Apr 80

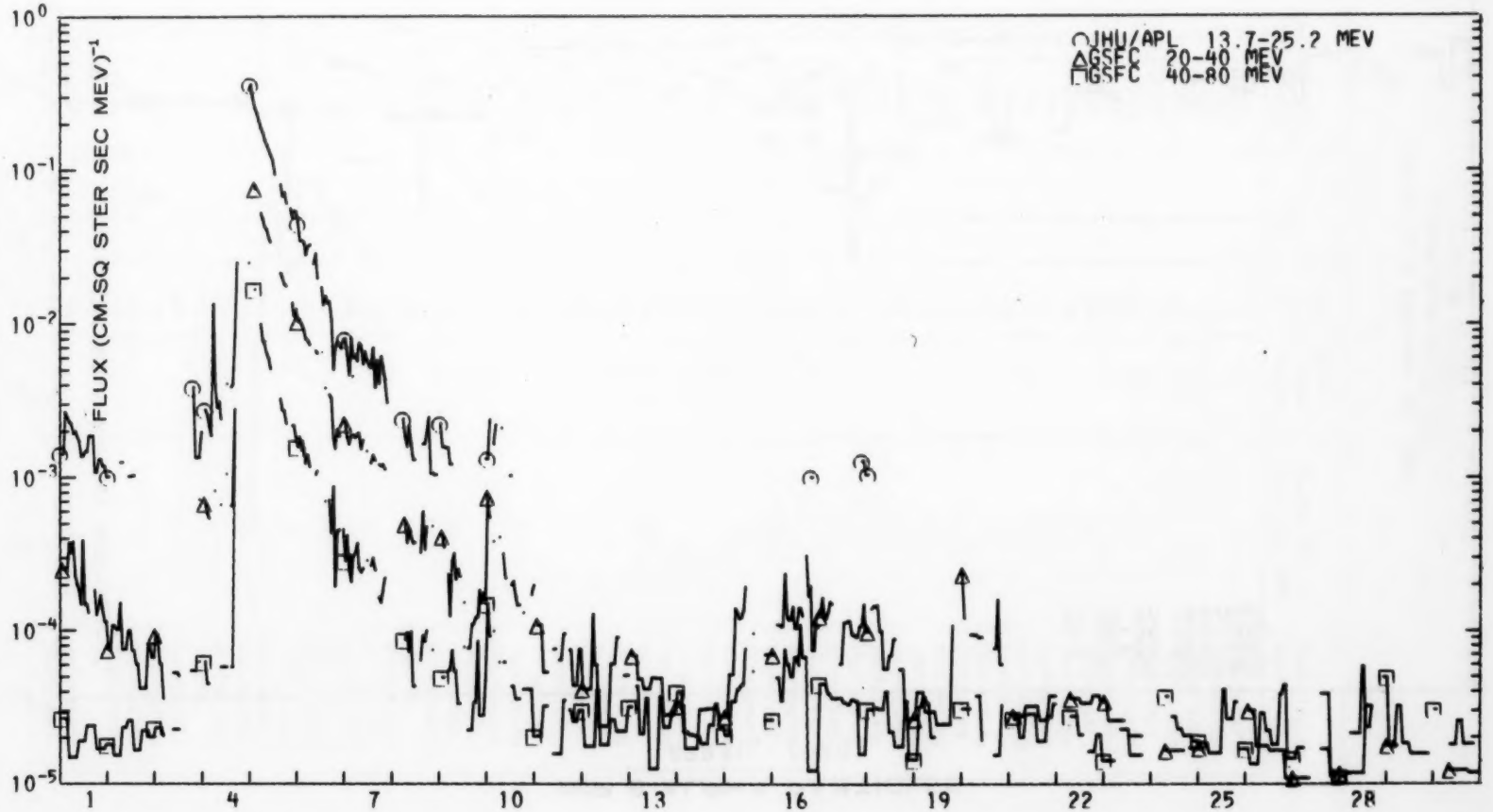
IMP 8 INTERMEDIATE ENERGY PROTONS

APRIL, 1980



IMP 8 HIGH ENERGY PROTONS

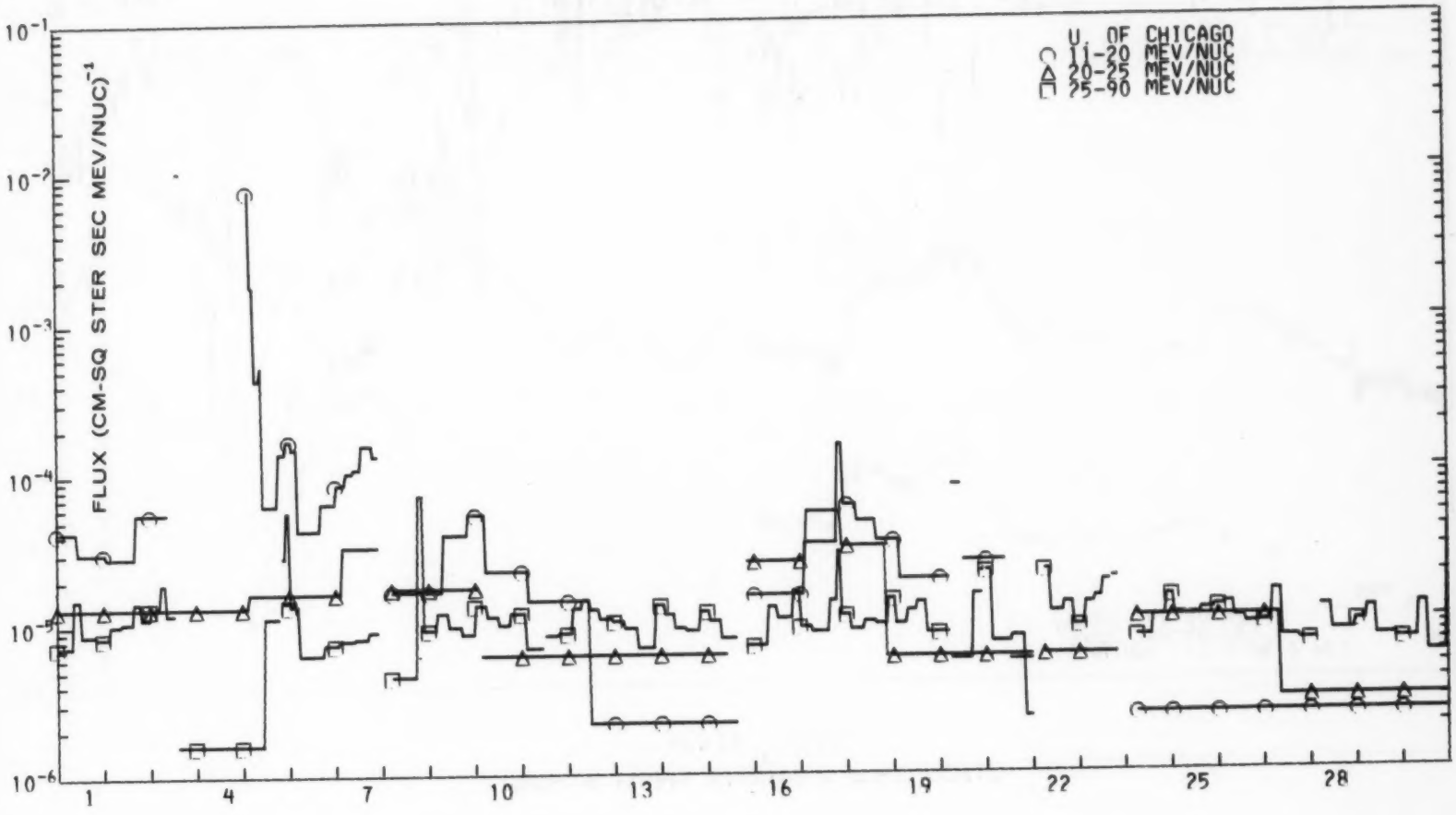
APRIL, 1980



45
Misc
Apr 80

IMP 8 ALPHA PARTICLES

APRIL, 1980



ACTIVE REGIONS
CARRINGTON ROTATION 1699
(August 29 to September 25, 1980)

Region No.	Coordinates Lat.	Long.	IMP	Age at CMP	Spot-less Region	Region No. in Rotation 1698	Activity at West Limb
1	14°S	356	1	+1	x		disappeared
2	23 N	348	4	0			decreasing
3	15 S	346	1	-3	x		dispersed
4	8 S	342	2	+1			decreasing
5	17 N	328	1	+4	x		dispersed
6	11 S	322	1	+1	x		disappeared
7	8 S	312	1	>6	x		dispersed
8	8 S	299	4	>6		8	decreasing
9	13 N	295	5	>6			decreasing
10	7 S	290	5	>6			decreasing
11	18 N	290	1	>6	x	7	decreasing
12	22 N	269	4	+6			stable
13	12 S	259	2	>6			decreasing
14	13 N	254	2	>6			dispersed
15	18 N	248	2	>6			decreasing
16	10 S	244	2	-1			decreasing
17	25 N	230	3	>6			decreasing
18	25 S	230	2	>6			decreasing
19	14 N	225	6	>6			decreasing
20	19 S	225	1	>6	x		dispersed
21	26 S	200	1	>6	x		dispersed
22	12 N	196	1	>6	x		decreasing
23	6 N	193	1	>6	x	25	dispersed
24	16 N	184	1	>6	x		disappeared
25	22 S	181	1	+5	x		disappeared
26	31 S	176	1	>6	x		decreasing
27	17 N	174	1	>6	x		dispersed
28	7 N	173	2	>6			decreasing
29	13 N	161	1	>6	x	34	dispersed
30	5 S	159	1	>6	x		decreasing
31	21 S	153	1	>6	x		dispersed
32	9 S	149	2	>6			stable
33	13 N	146	4	>6			decreasing
34	33 S	145	1	-6	x		dispersed
35	18 N	143	2	>6		41	decreasing
36	39 N	137	1	-1	x		decreasing
37	9 N	136	1	-4	x		dispersed
38	9 N	134	1	>6	x	46	dispersed
39	19 S	122	1	+4	x		disappeared
40	12 S	121	4	>6			stable
41	22 N	120	2	-2			dispersed
42	9 S	119	2	>6		47	decreasing
43	12 S	110	3	>6			decreasing
44	19 N	109	1	>6	x	49	decreasing
45	10 S	96	1	+5	x		disappeared
46	18 N	87	2	+1			decreasing
47	11 S	76	2	+2			decreasing
48	5 N	49	3	0			decreasing
49	10 N	46	3	+3			decreasing
50	18 N	46	5	+5			stable
51	32 S	46	3	>6			decreasing
52	14 N	45	2	0			decreasing
53	34 S	42	4	+3			decreasing
54	25 N	28	1	+6	x		disappeared
55	11 N	9	1	-5	x		?
56	9 N	3	2	+6			decreasing
57	28 S	2	1	>6	x		dispersed

SYNOPTIC SOLAR MAP
CARRINGTON ROTATION 1697
August 29-September 25, 1980
MEUDON OBSERVATORY
SEPTEMBER
AUGUST
E.
W.
N.
S.
+
-

SOME OTHER SOURCES OF DATA

Data Available: Some data available in publication form are cited here. A list is given, along with addresses of the responsible institutions. The WDC-A for Solar-Terrestrial Physics publishes the Toyokawa, Ottawa and Penticton radio data in its monthly publication, *Solar-Geophysical Data*. The WDC-A for Solar-Terrestrial Physics also receives most of the periodicals when they become available.

Belgium: *Bulletin d'Observations: Activite Solaire - Observations Radio-electriques Solaires - 600 MHz (Humain, Belgium)* Observatoire Royal de Belgique, Ave. Circulaire 3, Brussels, Belgium (monthly since 1962)

Canada: *Solar Noise Observations at 2800 Mc/s (Ottawa - ARO) and 2700 Mc/s (Penticton - DRAO)* Series C Monthly Report, National Research Council, Radio Astronomy Section Ottawa 7, Ontario, Canada (since 1947)

France: *Carte Synoptiques de la Chromosphere Solaire* Observatoire de Paris, 92 Meudon, France (monthly since 1931)

Germany: *Daily Mean Value of Solar Flux Density* Heinrich-Hertz Institut, 1199 Berlin-Adlershof, Rudower Chaussee 5, G.D.R. (monthly since Jul 1957)

Italy: *Solar Phenomena - Monthly Bulletin and Photographic Supplement* Osservatorio Astronomica di Roma, Monte Mario, Rome, Italy (monthly since 1958); *Osservazion Solari, Solar Flux and Distinctive Events* Osservatorio Astronomico Di Trieste (quarterly since 1965); *Solar Observations made at Catania Astrophysical Observatory* (annually since 1967)

Japan: *Monthly Report of Solar Radio Emission* Radio Astronomy Section, Research Institute of Atmospherics, Nagoya University, Toyokawa, Japan (since 1956); *Solar Activity Chart* WDC-C2, Toyokawa Observatory, Nagoya University, Toyokawa, Japan (annually since 1968); *IAU Quarterly Bulletin on Solar Activity* Tokyo Astronomical Observatory, Mitaka, Tokyo, Japan (since 1978)

Netherlands: *Geomagnetic Data* IAGA Bulletin No. 12 (1932-69), No. 32 (since 1970) IUGG Publications Office, 39 ter, Rue Gay-Lussac, Paris V, France (annually)

Philippines: Manila Observatory "Solar Maps and Activity", Manila Observatory, P.O. Box 1231, Manila, Philippines (monthly)

Switzerland: Bulletin of "Berne Solar Observations", Institute of Applied Physics, Div. of Solar Observations, Sidlerstrasse 5, 3012 Berne, Switzerland (since 1968)

Taiwan: *Report on Sunspot Observations* Taiwan Provincial Weather Bureau Observatory, Taipei, Taiwan (quarterly since 1957)

USSR: СОЛНЕЧНЫЕ ДАННЫЕ *(Solar Data)* USSR Academy of Science (monthly since 1958); КОСМИЧЕСКИЕ ДАННЫЕ *(Cosmic Data)* (monthly since 1962); *Magnetic Fields of Sunspots* (bimonthly since 1964)

USA: *Preliminary Report and Forecast of Solar-Geophysical Activity* Space Environment Services Center, NOAA, Boulder, Colorado 80303 USA (weekly); *Solar-Geophysical Data* NOAA, Boulder, Colorado 80303 USA (monthly since November 1955)

UAG Series of Reports

Between 6 and 12 UAG Reports are published at irregular intervals each year. Subscriptions may be ordered through the National Geophysical and Solar-Terrestrial Data Center, Environmental Data and Information Service, NOAA, Boulder, CO 80303, USA. The annual subscription price is $25.20 ($17.30 additional for foreign mailing). Each year the single copy prices total less than $25.20, the expiration data for all subscriptions will be extended. Back issues may be purchased at the prices shown below plus a $3.00 handling charge per order; some reports, though, are available only on microfiche. Orders must include check or money order payable in U.S. currency to the Department of Commerce, NOAA/NGSDC.

UAG-1 "IQSY Night Airglow Data," July 1968, 305 pp, $1.75.

UAG-2 "A Reevaluation of Solar Flares, 1964-1966," August 1968, 28 pp, $0.30.

UAG-3 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 6 July 1966 through 8 September 1968," October 1968, 35 pp, $0.55.

UAG-4 "Abbreviated Calendar Record 1966-1967," January 1969, 170 pp, $1.25.

UAG-5 "Data on Solar Event of May 23, 1967 and its Geophysical Effects," February 1969, 120 pp, $0.65.

UAG-6 "International Geophysical Calendars 1957-1969," March 1969, 25 pp, $0.30.

UAG-7 "Observations of the Solar Electron Corona: February 1964 - January 1968," October 1969, 12 pp, $0.15.

UAG-8 "Data on Solar-Geophysical Activity October 24 - November 6, 1968," Parts 1 and 2, March 1970, 312 pp, $1.75 (includes Parts 1 and 2).

UAG-9 "Data on Cosmic Ray Event of November 18, 1968 and Associated Phenomena," April 1970, 109 pp, $0.55.

UAG-10 "Atlas of Ionograms," May 1970, 243 pp, $1.50.

UAG-12 "Solar-Geophysical Activity Associated with the Major Geomagnetic Storm of March 8, 1970," Parts 1, 2 and 3, April 1971, 466 pp, $3.00 (includes Parts 1-3).

UAG-13 "Data on the Solar Proton Event of November 2, 1969 through the Geomagnetic Storm of November 8-10, 1969," May 1971, 76 pp, $0.90.

UAG-14 "An Experimental, Comprehensive Flare Index and Its Derivation for 'Major" Flares, 1955-1969," July 1971, 25 pp, $0.30.

UAG-16 "Temporal Development of the Geophysical Distribution of Auroral Absorption for 30 Substorm Events in each of IQSY (1964-65) and IASY (1960)," September 1971, 131 pp, $0.70 (microfiche only).

UAG-17 "Ionospheric Drift Velocity Measurements at Jicamarca, Peru (July 1967 - March 1970)," October 1971, 45 pp, $0.55 (microfiche only).

UAG-18 "A Study of Polar Cap and Auroral Zone Magnetic Variations," June 1972, 21 pp, $0.20.

UAG-19 "Reevaluation of Solar Flares 1967," June 1972, 15 pp, $0.15.

UAG-21 "Preliminary Compilation of Data for Retrospective World Interval July 26 - August 14, 1972," November 1972, 128 pp, $0.70.

UAG-22 "Auroral Electrojet Magnetic Activity Indices (AE) for 1970," November 1972, 146 pp, $0.75.

UAG-23 "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, November 1972, November 1972, 324 pp, $1.75.

UAG-23A "U.R.S.I. Handbook of Ionogram Interpretation and Reduction," Second Edition, Revision of Chapters 1-4, November 1972, 135 pp, $2.14.

UAG-24 "Data on Solar-Geophysical Activity Associated with the Major Ground Level Cosmic Ray Events of 24 January and 1 September 1971," Parts 1 and 2, December 1972, 462 pp, $2.00 (includes Parts 1 and 2).

UAG-25 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-41 MHz, 9 September 1968 through 9 December 1971," February 1973, 35 pp, $0.35.

UAG-26 "Data Compilation for the Magnetospherically Quiet Periods February 19-23 and November 29 - December 3, 1970," May 1973, 129 pp, $0.70.

UAG-27 "High Speed Streams in the Solar Wind," June 1973, 16 pp, $0.15.

UAG-28 "Collected Data Reports on August 1972 Solar-Terrestrial Events," Parts 1, 2 and 3, July 1973, 932 pp, $4.50.

UAG-29 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1968," October 1973, 148 pp, $0.75.

UAG-30 "Catalogue of Data on Solar-Terrestrial Physics," October 1973, $1.50. Supersedes UAG-11, 15, and 20 catalogs.

UAG-31 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1969," February 1974, 142 pp, $0.75.

UAG-32 "Synoptic Radio Maps of the Sun at 3.3 mm for the Years 1967-1969," April 1974, 26 pp, $0.35.

UAG-33 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1967," May 1974, 142 pp, $0.75.

UAG-34 "Absorption Data for the IGY/IGC and IQSY," June 1974, 381 pp, $2.00.

UAG-35 "Catalogue of Digital Geomagnetic Variation Data at World Data Center A for Solar-Terrestrial Physics," July 1974, 20 pp, $0.20.

UAG-36 "An Atlas of Extreme Ultraviolet Flashes of Solar Flares Observed via Sudden Frequency Deviations During the ATM-SKYLAB Missions," October 1974, 95 pp, $0.55.

UAG-37 "Auroral Electrojet Magnetic Activity Indices AE(10) for 1966," December 1974, 142 pp, $0.75.

UAG-38 "Master Station List for Solar-Terrestrial Physics Data at WDC-A for Solar-Terrestrial Physics," December 1974, 110 pp, $1.60.

UAG-39 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1971," February 1975, 144 pp, $2.05.

UAG-40 "H-Alpha Synoptic Charts of Solar Activity for the Period of Skylab Observations, May 1973 - March 1974," February 1975, 32 pp, $0.56.

UAG-41 "H-Alpha Synoptic Charts of Solar Activity During the First Year of Solar Cycle 20 October 1964 - August 1965," March 1975, 25 pp, $0.48.

UAG-42 "Observations of Jupiter's Sporadic Radio Emission in the Range 7.6-80 MHz, 10 December 1971 through 21 March 1975," April 1975, 49 pp, $1.15.

UAG-43 "Catalog of Observation Times of Ground-Based Skylab-Coordinated Solar Observing Programs," May 1975, 159 pp, $3.00.

UAG-44 "Synoptic Maps of Solar 9.1 cm Microwave Emission from June 1962 to August 1973," May 1975, 183 pp, $2.55.

UAG-45 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1972," May 1975, 144 pp, $2.10 (microfiche only).

UAG-46 "Interplanetary Magnetic Field Data 1963-1964," June 1975, 382 pp, $1.95.

UAG-47 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1973," June 1975, 144 pp, $2.10 (microfiche only).

UAG-48A "Synoptic Observations of the Solar Corona during Carrington Rotations 1580-1596 (11 October 1971 - 15 January 1973)," [Reissue of UAG-48 with quality images], February 1976, 200 pp, $4.27.

UAG-49 "Catalog of Standard Geomagnetic Variation Data," August 1975, 125 pp, $1.85.

UAG-50 "High-Latitude Supplement to the URSI Handbook on Ionogram Interpretation and Rediction," October 1975, 294 pp, $4.00.

UAG-51 "Synoptic Maps of Solar Coronal Hole Boundaries Derived from He II 304A Spectroheliograms from the Manned Skylab Missions," November 1975, 30 pp, $0.54.

UAG-52 "Experimental Comprehensive Solar Flare Indices for Certain Flares, 1970-1974," November 1975, 27 pp, $0.60.

UAG-53 "Description and Catalog of Ionospheric F-Region Data, Jicamarca Radio Observatory (November 1966 - April 1969)," April 1976, 10 pp, $0.33.

UAG-54 "Catalog of Ionosphere Vertical Soundings Data," April 1976, 130 pp, $2.10.

UAG-55 "Equivalent Ionospheric Current Representations by a New Method, Illustrated for 8-9 November 1969 Magnetic Disturbances," April 1976, 91 pp, $1.60 (microfiche only).

UAG-56 "Iso-intensity Contours of Ground Magnetic H Perturbations for the December 16-18, 1971, Geomagnetic Storm," April 1976, 37 pp, $1.39.

UAG-57 "Manual on Ionospheric Absorption Measurements," June 1976, 302 pp, $4.27.

UAG-58 "ATS6 Radio Beacon Electron Content Measurements at Boulder, July 1974 - May 1975," September 1976, 61 pp, $1.04.

UAG-59 "Auroral Electrojet Magnetic Activity Indices AE(11) for 1974," December 1976, 144 pp, $2.16.

UAG-60 "Geomagnetic Data for January 1976 (AE(7) Indices and Stacked Magnetograms)," July 1977, 57 pp, $1.07.

UAG-61 "Collected Data Reports for STIP Interval II 20 March - 5 May 1976," August 1977, 313 pp, $2.95.

UAG-62 "Geomagnetic Data for February 1976 (AE(7) Indices and Stacked Magnetograms)," September 1977, 55 pp, $1.11.

UAG-63 "Geomagnetic Data for March 1976 (AE(7) Indices and Stacked Magnetograms)," September 1977, 57 pp, $1.11.

UAG-64 "Geomagnetic Data for April 1976 (AE(8) Indices and Stacked Magnetograms)," February 1978, 55 pp, $1.00.

UAG-65 "The Information Explosion and Its Consequences for Data Acquisition, Documentation, Processing," May 1978, 36 pp, $0.75.

UAG-66 "Synoptic Radio Maps of the Sun at 3.3 mm 1970-1973," May 1978, 30 pp, $0.75.

UAG-67 "Ionospheric D-Region Profile Data Base, A Collection of Computer-Accessible Experimental Profiles of the D and Lower E Regions," August 1978, 30 pp, $0.88 (microfiche only).

UAG-68 "A Comparative Study of Methods of Electron Density Profile Analysis," August 1978, 30 pp, $0.88 (microfiche only).

UAG-69 "Selected Disturbed D-Region Electron Density Profiles. Their relation to the undisturbed D region," October 1978, 50 pp, $1.29 (microfiche only).

UAG-70 "Annotated Atlas of the H-alpha Synoptic Charts for Solar Cycle 20 (1964-1974) Carrington Solar Rotations 1487-1616," February 1979, 327 pp, $3.50.

UAG-71 "Magnetic Potential Plots over the Northern Hemisphere for 26-28 March 1976," April 1979, 118 pp, $1.50.

UAG-72 "Energy Release in Solar Flares, Proceedings of the Workshop on Energy Release in Flares, 26 February - 1 March 1979, Cambridge, Massachusetts, U.S.A.," July 1979, 68 pp, $1.50 (microfiche only).

UAG-73 "Auroral Electrojet Magnetic Activity Indices AE(11-12) for January - June 1975," August 1979, 114 pp, $1.75.

UAG-74 "ATS-6 Radio Beacon Electron Content Measurements at Ootacamund, India, October - July 1976," March 1980, 58 pp, $2.50.

UAG-75 "The Alaska IMS Meridian Chain: Magnetic Variations for 9 March - 27 April 1978," June 1980, 107 pp, $3.00.

UAG-76 "Auroral Electrojet Magnetic Activity Indices AE(12) for July - December 1975," August 1980, 116 pp, $2.50.

UAG-77 "Synoptic Solar Magnetic Field Maps for the Interval Including Carrington Rotations 1601-1680, May 5, 1973 - April 26, 1979," August 1980, 66 pp, $2.50.

UAG-78 "The Equatorial Latitude of Auroral Activity During 1972-1977," October 1980, 61 pp, $3.00.

UAG-79 "Solar Observations During Skylab, April 1973 - February 1974, I. Coronal X-Ray Structure, II. Solar Flare Activity," December 1980, 43 pp, $2.50.